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THE

MEDICAL EXAMINER,

AND

RECORD OF MEDICAL SCIENCE.

EDITED BY

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A Military Hospital at Buffalo, New York, in the year 1814.

(Continued.)

The following general results came within my experience:

1. Buckshot wounds seldom did much harm, vital parts excepted. Those that I saw were principally on the persons of prisoners of war. They approach so near a simple laceration without contusion, that they soon get well. I have now one sticking very tranquilly in an os femoris, as if it had grown there. They are, I understand, peculiar to the American service. They give a more barbarous character to warfare, and probably without an equivalent advantage. This, however, I submit to the decision of military men. The English officers took that view of them, and considered them simply as mangling unnecessarily, but interfering with the effectiveness of the principal ball. Their momentum is too weak to penetrate far; really vital parts are

well covered and make but a small portion of the entire area of the body. It would, perhaps, be better for our national credit to discontinue such missiles, at least in war with civilized nations. The only recommendation that I ever heard of them was, that as they inflict a wound, the character of which is of course unknown to its recipient, he retires from the field of battle. They are therefore advantageous simply in multiplying wounds, though the latter may not be serious. If their use be a real advantage in gunnery, they can be thrown by one party as well as by the other, so that things are thus equalized. I have understood that their use at present is not so indiscriminate as formerly, and that they are resorted to principally in close contest.

Should they open articular cavities, then the mischief is of course considerable. Col. Miller of the U. S. Army, in an expedition to Long Point, opposite Fort Erie, had his knee joint perforated in that way, and inflammation and suppuration followed; he finally, after a long treatment, submitted to amputation, but without benefit, as he died shortly after.

2. Bullet wounds which did no injury to the bones, or to the great cavities, generally did well; a slight inflammation and stiffness followed, which went off in a few days. Our most common dressing in these cases, was basilicon, simple cerate, or tallow; poultices or discutients were seldom absolutely indicated. The wound was cleaned by the efforts of nature, in eight, ten or twelve days, it being succeeded by a copious discharge of pus, which gradually diminishing, the wound healed.

3. When the large cylindrical bones were broken, our resort was, for the most part, amputation; we had but few cases, the result of which encouraged us to attempt the saving of others. Out of many cases of fractured os humeri and os femoris which I saw, a majority of the patients died, or were compelled to submit finally to amputation; there being but few instances of perfect recovery from such accidents. The latter circumstance was partly attributable to the largeness of the English musket balls, which almost always produced an extensively comminuted fracture when they struck a hard bone. Amongst the instances of recovery, where the thigh bone was broken, was that of Lieutenant-Colonel M'Neil of the 11th Infantry, and Captain Cilley of the same regiment, and a few privates of other corps.

Col. McNeil was wounded at Bridgewater by a ball which passed

through the thigh, somewhat above the patella, and under the tendon of the extensor muscles, breaking in its course some portion of the condyles of the os femoris. The contusion was great. Much inflammation and suppuration followed, but he finally recovered with a joint somewhat stiff. He was a man of vigorous, healthy constitution, and stood more than six feet in height. The probability is that the synovial cavity was not opened; he was attended by another surgeon.

Captain Cilley had his thigh comminuted near the middle by a ball; his attending Surgeon, Dr. Trowbridge,* made four incisions into the thigh, so as to afford room for the discharge of the fragments; they were passed out in a few weeks of inflammation and suppuration, which extended but little beyond the immediate region of injury. A rapid recovery with a useful leg followed, though the length of the latter was reduced three inches.

In the cases of recovery which came under my observation, the thigh bone was broken somewhere in its lower half; this fact corresponds with the testimony of those surgeons who have had the greatest experience in gun shot wounds.† A short time after a gun shot fracture of a large bone, the limb became highly inflamed, and swollen to twice its natural size; sinuses, which opened into the wound, were the almost invariable consequences of this inflammation; after they had existed for a time, the patient's health was destroyed; he became afflicted with diarrhœa and hectic fever, which were very frequently fatal.

4. During the heat of the summer our large amputations were very unsuccessful, so much so, as almost to discourage us from performing them; many of the recent stumps mortified; in others that did not, the patient gradually sank into the arms of death. In the latter, I observed that there was great retraction of the muscles, and frequently the periosteum separated from the bone, for a considerable distance up. Mortification of the extremities from gun-shot wounds, was very common at this period; a variety of tonic and other means were adopted to arrest its progress, and amongst the latter amputation;‡ nothing succeeded.

*Boston Med. and Surg. Jour. 1838, p. 341.

†See Thomson's Reports of Military Observations in Belgium.

‡See Larrey, (Memoirs of Military Surgery,) who recommends this practice.

5. Wounds attended with much discharge were frequently infested with maggots, the ova of which were deposited by flies (Musca carnaria) in the bed-clothes and dressings. This accident will probably be attributed to negligence, but the most diligent attention from nurses could not prevent it. It was a most serious evil, and frequently involved the life of the patient from the irritation produced.*

It was marvellous to see how deeply these animalcules would work their way into wounds, producing, in some instances, as complete a dissection of the muscles, as if it had been performed by the knife. I learned on this occasion from a common soldier that the expressed juice of the Elder Bark, (Sambucus nigra,) sprinkled on the dressings and bed of the patient, would keep the flies away; and on trial I found it to be so. The suggestion was made in the case of a gallant artilleryman from Virginia, John Horton, in Captain Ritchie's company, and who had suffered the loss of both legs from a cannon shot, followed by amputation. The interest felt in him induced me to place a special nurse to prevent the approach of flies. He was saved from the latter accident, but died in a few days, from his wounds.

6. I saw a few cases of wounds, through the large joints. They were more painful than any other wounds, the patient suffering excruciating torture for several weeks. Somehealed by anchylosis, but we most frequently had in the end to amputate, or to lose the patient, in consequence of sinuses and hectic fever. Sometimes a low delirium took place, particularly in gun-shot wounds of the knee joint, in which the patient died in a few days after the injury. Wounds through the ankle joint were not attended with so much danger.

7. Gun shot wounds of the brain were in some instances very slow in being fatal. John Price, a private of the 1st regiment of Infantry, was wounded at Bridgewater, on the 25th of July 1814; the ball penetrated, transversely, the forehead, passed through the brain above the ventricles, and fractured the opposite part of the cranium; he died on the 2d of September following, five weeks after the injury. Several other examples occurred, in which the substance of the brain was wounded by balls and by tomahawks,

*An analogous fact is quoted from Alanson, by J. Bell.

when the patients continued to live for many days; but I saw no instance of final recovery from such accident.

8. Several persons recovered who were shot through the throat, in such a manner as to endanger the carotid arteries and the important nerves. Amongst them were Brigadier, afterwards Major General Ripley,* and Lieutenant, afterwards Major M'Intosh,† of the Rifle Corps. Both these officers lost the use of their upper extremities for a long time, and suffered exquisite pain in them. The latter discharged the ball, per anum, several months after he had been wounded.

9. Several recoveries from wounds through the thorax took place. Amongst them were Lieutenant Colonel Trimble, afterwards in the United States Senate from Ohio; and an Ensign of the 19th infantry. Bleeding to a very great extent, was used in all these cases. Lieut. Col. Trimble received a ball near the junction of the fifth costal cartilage with the sternum; the ball penetrated the lung and emerged from the back near the angle of the fifth rib. The hemorrhage from the lung by the mouth was most copious, and at each expiration blood poured freely from the external wounds, which of course implied a large collection of it in the pleura. Dyspnœa, feeble pulse, and cold extremities, left him apparently but little chance of life, but on the fifth day the symptoms mitigated. He was bled in the subsequent twenty-two days, six times by his attending surgeon, Dr. Amos Trowbridge,‡ and finally recovered. While a member of the Senate of the United States, he died at Washington in 1822, from a pulmonary affection, brought on by exposure in the preceding season.

10. Wounds of the abdomen, and its contents, were, in several instances, recovered from; amongst such were Lieutenant Cisna, of the 19th infantry, and a Sergeant White. In the first, the ball entered in the anterior part of his belly, below the navel, and

*Case reported in the New York Medico-Chirurgical Journal, by his attending Surgeon, Dr. Allen.

†Case reported in the Eclectic Repertory, by Dr. W. H. Henning, of the Rifle Corps. Lieutenant M'Intosh was at different times under the care of us both. He lived for many years afterwards and was with distinction engaged, I believe, in both the Indian war in Florida, and in the late Mexican War.

‡For details, see Bost. Med. and Surg. Jour. for 1838, p. 344.

came out near the spine; about six weeks afterwards a button was discharged from the wound, near the spine, which had been carried in along with the ball.

Sergeant White's belly was penetrated by a ball, which also took in some fragments off the breech of his musket. The fragments were afterwards discharged at the orifice of the wound, during a free suppuration of it.

11. A case terminated happily where the ball had entered above the symphysis pubis, and came out posteriorly; the fundus of the bladder was penetrated; for several weeks there was a constant dripping of urine from the anterior wound; it at length ceased to flow in this direction, and came in the natural way.

12. In four cases of wounds of the spine, they all had pretty much the same symptoms; being attended with loss of sensibility and motion in all the parts below the injury.

For the first few days the patients were unconscious of their danger, the strength and activity of the upper extremities and parts of the body; and the quickness of intellectual operations, being very encouraging. It was necessary to introduce the catheter twice a day, or more often, in these cases; and to expel the contents of the bladder by pressing above the symphysis pubis. Purgatives were also necessary. In all these cases mortification took place on the sacrum, in consequence of pressure. A great irritability of the stomach occurred in each, a few days before death.

So far as I remember, in those and other similar cases, hiccup has always attended, and also delirium, before the final scene.

13. In amputations of the leg, to get the flap from the integuments, on its posterior part, was decidedly advantageous, in some respects, regarding the healing of the stump. If, instead of this, a circular flap was made, the part of it covering the sharp edge of the tibia was most generally ulcerated through, and the ulcer remained exceedingly painful and absolutely incurable, till the absorbents rounded off the tibia. This disadvantage was very striking with the circular flap adjusted transversely instead of vertically, *i. e.* antero-posteriorly. The flap extending from behind is, however, apt to separate, or rather not to attach itself

to the muscles; and, in such case, when suppuration came on, it retained the matter, and sometimes ulcerated through. My subsequent experience has led me now to prefer the circular cut with the vertical adjustment, and a bevel cut upon the spine of the tibia saves the absorbents a long work in rounding it off.

I saw an attempt to make a flap of the gastrocnemius and solæus muscles, on the principle recommended by Mr. Hey and others. It succeeded badly, the flap became very much inflamed and swollen, left entirely the surface of the stump, and could not be brought back; it gave the limb the appearance of a club. After a variety of means was fruitlessly tried to bring about cicatrization, a second amputation became necessary in order to save the patient's life.

A similar attempt on my own part since, in the Philadelphia Alms-House hospital, though not attended with such bad consequences, was very unsatisfactory, from the difficulty in making the flap unite.

Two amputations of the inferior extremities, a thigh and a leg, were performed by an inexpert surgeon, in which no flap was left; the patients recovered, however, after a very long confinement. The stumps became conical from the retraction of the muscles, and a second sawing of the bones was requisite to the cure.

Two amputations at a delayed period, that is when inflammation had set in, were performed. The suffering of the patients was much beyond the ordinary agony. The quickly fatal results proved the necessity of attending well to the rule, that such operations are never to be performed for severe projectile wounds, except in a few hours after their reception; or after several weeks have elapsed, and the symptons of inflammation are entirely gone.

Soldiers are much disposed to repress the expression of pain, considering it unmanly. When this natural mode of easing the circulation of the lungs by groans and expiration was withheld, which can only be done by holding the breath, I came to the conclusion that it was highly disadvantageous to the individual. Chewing a bullet is a resort which should also be discountenanced. The introduction of ether since that period, will now make these cautions less necessary. The amount of pain excited in different persons varies very much. I assisted at an amputation of the leg of a soldier who was smoking tranquilly during the whole operation, his ease not seeming to be an affectation.

I did not see a case of recovery where amputation had been performed on both legs, or on both thighs, in one subject; but I saw a few recoveries *where* a leg and an arm, or two arms had been resected. Several double accidents of this kind happened during the seige of Fort Erie. In one instance, a cannon ball entered a hospital, and ranged along the feet of a row of bedsteads, carrying away several legs in its course. In another instance, a young rifleman, of eighteen, belonging to Captain Irvine's company, had both arms taken off above the elbow joint, by a cannon shot. The ball being nearly spent, he then started in pursuit of it, not appalled by what had happened, but continuing to kick it as an enemy until its motion gradually subsided. His gallantry and coolness on this occasion, procured him the notice of several distinguished officers. I saw one case of recovery from amputation at the shoulder joint. This operation was performed by Dr. Gales, of the 23d infantry, whose services and intrepidity gained a high distinction.

14. Some cures, from extensively lacerated wounds, took place; amongst them, J. King, a private in Captain Biddle's company of artillery. He had the whole posterior part of his thigh, from the buttock to the ham, torn up by the fragment of a shell, and the muscles laid bare, as in a dissection. This extensive wound, in which there was a great loss of integuments, cicatrized, and got nearly well in three or four months. A private in the Infantry already alluded to, was scalped in a circular line, just above the tips of his ears. Granulations arose from the exposed surface of bone and pericranium, in a few days, and cicatrized very kindly; the discharge of pus was, for a long time, very considerable.

15. In one case I succeeded in a very rapid cure of fistula, in the lower extremity, produced by fracture in the lower part of the tibia. An intense and extensive inflammation of the whole limb followed the injury; this was succeeded by the deposition of matter all up the leg, and extending even above the knee. When the suppuration was pretty well established, by pressing carefully the matter from the sinuses for two or three days, so as to empty them completely, I succeeded in obtaining a radical cure, by placing compresses on the course of the sinuses, and securing them by a tight roller applied from the foot to the groin. The fracture did very well.

This manner of treating inflammation of the extremities, has since been very fully elucidated by the celebrated French Surgeon, Velpeau, in his writings upon the principle of what he calls systematic compresses.

16. I treated two cases of traumatic tetanus; the one was produced by a gun-shot wound through the pectoralis major muscle; the other by the same kind of wound through the sole of the foot. The first was managed with large quantities of laudanum; the patient died. The second was treated with laudanum also; and according to the plan proposed and adopted by Larrey, the surface of the wound was cauterized with a red-hot iron. A temporary remission was produced in the spasm, but it returned, and the patient died the day after the application.

Such were the general observations resulting from the surgical occurrences which came under my personal notice.

As in most active campaigns, the duties of the surgeon were too urgent to allow time for the taking of very complete notes on cases. Hence, general recollections have to be substituted, to a large extent, instead of precise tabular statements. At this period of time, when the actors of that day have so generally passed off the stage, it is a matter of sincere regret to me that so little has been published by others; and from recent enquiries at the War Department, it appears that no reports are there to supply this deplorable defect. It is to be hoped that the few medical survivors of this remarkable campaign may yet be stimulated to give in their full experience by publications, or at any rate make a deposit of it in manuscript at the Medical Bureau of the Army. How precious would such details of the American Revolution be; yet there are few or none.

The following account of the diseases and weather will probably be read with interest:

* *Report of Hospital Surgeon* LOVELL, *of the state of diseases among the Troops on the Niagara Frontier, during the Campaign of* 1814.

"The troops engaged in this brilliant campaign on the Niagara, began to collect there about the beginning of April, under the command of General Scott. They were encamped on an eminence north of Buffalo

* From Medical Sketches of the Campaigns of 1812, '13, 14, by Jas. Mann, M. D., Hospital Surgeon, &c. Pp. 160 et seq. Dedham, 1816.

village, having a thick wood in front, which extended to the bank of the river, the ground being in part swampy and wet. On the left of the encampment was a large marsh, extending from the high ground to the margin of the lake. The winds from the lake, at this season, were remarkably cold and chilling; resembling, in sensation, exactly the east winds which prevail on the Atlantic during the spring; and had an astonishing effect upon vegetation. The trees around the encampment having the appearance of winter, while those five or six miles from the lake shore, were covered with verdure. Notwithstanding this, the troops were remarkably healthy; only one or two deaths occurring before they crossed the Niagara, on the 3d of July—even the demon diarrhœa appeared to have been exorcised by the mystical power of strict discipline and rigid police.

In June a number of new recruits joined the army; and several were collected from the various hospitals; the latter principally composed of the miserable refuse of society, who never had energy enough to demonstrate that they lived, and scarcely enough to prove that they existed. With these last detachments, arrived our old acquaintances, which, however, were easily checked; and much seldomer returned, than in any former campaign. This was undoubtedly to be attributed to the improvement in police.

During June, the weather became very warm, and a thick fog arose from the marsh and woods at sunset, and remained for some time after sunrise. During this month, intermittent fever, acute rheumatism, and typhus fever were the prevailing complaints. The intermittents were very irregular and obstinate. Arsenic, which was the sovereign remedy the last year, on this frontier, had now very little effect; while the bark, which then failed, was now generally successful. Some obstinate cases, in which every thing else had failed, were cured by the sulphate of copper. Three patients, who had tried most of the remedies with which we were supplied, without effect, cured themselves at once, by taking a pint of brandy undiluted, in which was mixed a large quantity of ground black pepper, on the accession of the cold stage. This was not followed by inebriation nor any appearance of undue excitement. It led me to use opium in much larger quantities than I had been accustomed. It was begun with four or five grains at a dose, and increased until some stimulating effects were produced, or the disease cured. The success of this prescription was very great during the whole season. In fine, of the remedies used this season, emetics had but little effect, even at first; and the mineral solution scarcely any—bark succeeded in the majority of cases; and opium very seldom failed. A few obstinate cases were checked for several periods, by the application of tourniquets to one leg and one arm; the disease however recurred; the tourniquets then had no effect; but remedies, which had before failed, now succeeded, after the interruption thus produced in the morbid associations.

Rheumatism, during the whole war, generally put on a remitting form; this was particularly obvious whenever intermittent fever prevailed, and more especially this season. Bleeding was but seldom necessary; after a brisk cathartic, bark was given in the quantity of from four to eight drachms during the remission, and a large dose of

opium on the accession of the fever; and always in sufficient quantity to relieve the pain. This treatment was very generally successful. I was induced to try it, in many cases, where the remissions were very slight, and generally effected a cure. In these, however, bleeding or purging were premised, which produced more perfect remissions. In short, I considered the bark and opium the remedies for rheumatism, particularly when intermittents prevailed, and for the most part succeeded.

Many of the cases of typhus, about the end of May, were remarkably severe. The most prominent symptoms were great prostration of strength, and delirium; of the species not attended with symptoms of great arterial action in the head, local applications as usual having no effect upon it. Symptoms of recovery were not observed in these cases, until the end of the third week. The treatment adopted was strictly that of Fordyce, and recovery took place in every instance.

On the first of August, a general hospital was established at Williamsville, eleven miles east from Buffalo. The number of sick, during the remainder of the season, at this place, varied from 3 to 400; the number of wounded being somewhat greater.

The troops suffered much during the seige of Fort Erie; and soon after it was raised, the rainy season commenced. Dysentery and diarrhœa were the principal diseases. I became fully convinced, after a fair trial of every medicine to be obtained at this place, of the decided advantage of ipecacuanha in various forms and doses, to any other remedy. The remarkable effects of this medicine, which Fordyce considers as acting specifically in typhus fever, led to the conclusion, that the febrile symptoms attending the latter stages of diarrhœa were in fact a true typhus, supervening upon the former complaint. Hasty in his treatise on dysentery, he speaks of several complaints, which are often combined with typhus fever; and are then generally contagious; and I had observed that the nurses of the wards, where diarrhœa prevailed, were often attacked with typhus, accompanied with diarrhœa, or a great tendency to it. Decided benefit had often been observed from small doses of ipecacuanha, with mucilaginous drinks, in an irritable state of the stomach and bowels, which appeared to be owing to a degree of inflammation extending through the mucous coats; and not attended with febrile symptoms; and it is probable that the good effects of the remedy, in the cases now referred to, were in some measure to be attributed to this mode of operation. Intermittent fevers and rheumatism prevailed during the whole season, and varied but little from the cases in May and June. The cases of typhus among the regular troops were generally mild.

About the end of September, a large detachment of militia crossed the Niagara, under General P. B. Porter. Diarrhœa, typhus and idiopathic dysentery very soon made their appearance among them; the two latter were extremely severe. As these patients were not sent to the general hospital, until they had been sick for some time, I saw only the latter stages of these complaints. The dysentery was at this period very obstinate; the bloody discharges and tenesmus incessant, and the prostration of strength as usual most dangerous. In this state, relief was very generally obtained from injections of a decoction of ipecacu-

anha, sometimes combined with laudanum; at others, the irritability was first reduced by an injection of laudanum alone. The decoction was often rejected immediately; it had, however, some effect even then, so that by repeating it several times, it would finally remain, and give relief. Blisters to the abdomen often had a very good effect; but no application to the part appeared generally to prove so beneficial, as a poultice of slippery-elm bark to the whole abdomen, often repeated. It relieved the tenesmus, and produced a gentle diaphoresis, which was promoted by warm mucilaginous drinks, a mixture of tinct. opii. and tinct. ipecac. This was the only treatment found beneficial in the latter stages of this complaint, and it very generally succeeded. Typhus, among the militia, was very severe. Patients were seldom sent to the general hospital, until the third week of the fever; and the treatment had been different, as the whims of the attending surgeons. The most usual practice, however, among them, was to blister the patient almost from the crown of his head to the soles of his feet; so that the chief difficulty was to remove the irritative fever induced by this *empirical, slovenly* practice. In some, calomel had been employed, but generally without any obvious effect, except increasing the danger of the patient. At this stage of the complaint, and under these circumstances, no general method of treatment could be adopted, except remedying the mischief which had been done. The cure was principally attempted by removing every cause of irritation, as appeared most urgent, and trusting to nursing and nourishment. Under this plan many appeared to be in a fair way of recovery; but in the course of the fourth week, a small circumscribed spot of inflammation showed itself in the face, generally, near the angle of the mouth. In a few days the whole side of the face swelled; this tumor was hard and pale, resembling the color of a white swelling of the joints. It was not in the seat of the parotid gland, but anterior to the branch of the lower jaw, and was attended with a most profuse and fetid salivation, apparently from irritation communicated along the salivary duct, as the liver and gall-bladder are excited by the chyme. In a few days more the red spot began to assume a livid appearance, and symptoms of incipient mortification. In a short time, the mouth was literally extended from ear to ear, exposing the backmost grinders on both sides. All the remedies usually employed in this species of disease, were employed without visible benefit. The only article which appeared to produce any good effect was charcoal, which, however, seemed only to prolong the sufferings of the patients. Three attacked with this affection had severally so far recovered as to have a good appetite, and sit up a great part of the day. Their strength and appetite held out surprisingly, after mortification had taken place. I have since seen two instances among citizens; one in Boston, on a young boy. He had so far recovered as to sit up; he took nourishment with a good appetite, and every symptom of fever had disappeared; when, about the middle of the fourth week, the swelling, salivation and mortification took place, and shortly he sunk. It should be added, that in the majority of these cases not a particle of mercury had been used in any form."*

*The same disease was observed by Surgeon Purcell in the Military Hospital, Burlington, Vt., in the autumn of 1814. See Mann, loc. cit., p. 164.

Several interesting cases of wounds occurred in our hospital after the battle of Chippewa; many operations were performed by the regimental surgeons on the field of battle, but a majority of them were left for the hospital staff. I shall relate a few cases, with the success attending their treatment.

Case 1.—A private in the 11th regiment of infantry, received a wound from a grape shot in the right breast, between the nipple and sternum; the ball passed under the sternum, obliquely downwards, and emerged about four inches from the sternum on the left side, beneath the edge of the pectoralis major. The first time I saw this patient was on the third day after the reception of the injury; he said he had bled a great deal, and his clothes still showed the marks of considerable hemorrhage. I presumed that the internal mammary artery was cut or ruptured; however, as the wound had ceased to bleed before I saw him, the condition of the artery did not excite much attention.

The patient's pulse was feeble and quick, and he complained of great stiffness in his breast; his breathing was regular but hurried; I prescribed a light diet for him, and applied the common adhesive plaster to his wound on each side. I was much struck with the circumstances of this case, for the ball had passed between the sternum and mediastinum without producing a solution of continuity in either, which, had it injured the latter, would have been known by the state of respiration. I went to visit him on the fourth day, having obtained the advice and assistance of Dr. Thomas, hospital surgeon. The patient's pulse had become full, he had a slight cough, and complained of wandering pains in his breast, superadded to those occasioned by the wound. The depleting plan was here evidently indicated. I bled him to the amount of sixteen ounces, and dressed the wound as usual; in the afternoon I bled him again, as the symptoms had not been mitigated. By bleeding four or five times more, once a day, or on alternate days, the inflammatory symptoms were thoroughly subdued, and he no longer complained of his breast, except in the wounded part.

About the tenth or twelfth day the suppuration was so profuse as to require three or four dressings in the twenty-four hours.

His appetite finally returned, and his excretions were regularly performed; he was, however, from being a robust man, much reduced. As the suppuration diminished, the granulations sprung up; in about fifty days the cicatrix was completed, and his health, in a considerable degree, restored.

Case 2.—Sergeant Smith, of the 11th infantry, was wounded the 5th of July, in the breast, by a musket ball. The ball entered on the left side, between the sixth and seventh ribs, and came out near the spine on the same side. I saw him on the third day after the injury. He then labored under oppression of breathing, and his muscular strength was much prostrated. The sides of the wound were tumefied and inflamed; I, therefore, could not make a satisfactory examination of the direction of the ball. I supposed, however, from his anxious and hurried breathing, that the lungs were wounded. I bled him to the amount of a pint, and dressed his wounds with yellow basilicon. On the fourth day I bled him again; this bleeding seemed to relieve him much. I enjoined on him the strictest antiphlogistic diet that the nature of our hospital stores admitted of.

By some new arrangement in the wards of the hospital, he was left out of my list, and transferred to my assistant, Dr. Coltrin; I therefore did not see him again for eight or ten days. At that time the wounds in his side were discharging matter very profusely, and a few granulations had risen up.

Air was inhaled and exhaled through the wound in the fore part of his breast, but not through the posterior wound. He believed himself to have been struck by two balls at the same time; if this be the fact, it will account sufficiently for the air rushing only through the anterior wound. About the last of August I saw him again; he was then emaciated almost to a skeleton, and had a harassing cough, with purulent expectoration, which threatened to terminate his existence in a few days. He continued in this unpromising way for several weeks longer; the wound in the fore part of the chest healed up, but that in the back continued running. His wounds, during this period, had been dressed with yellow basilicon or cerate, and his cough palliated by demulcents. The cough left him about the first of November, but his extreme emaciation and weakness continued

From this time he began to recruit a little, and in fair weather sometimes ventured out of his apartment. We now entertained hopes of his recovery. About the first of December, the wound in his back discharged but little, and was nearly healed. He was suddenly seized with lancinating pains near the wound, and spasms of the intercostal muscles and diaphragm, which sometimes suspended his respiration for a minute or more. Our hopes now vanished, and the attendants were frequently in the act of laying him out for dead.

Dr. Coltrin and myself visited him in concert. On examining the wound in his back, I perceived an obscure fluctuation near it. Having made an incision with my lancet, a few spoonfuls of healthy pus were discharged, and relief obtained for the time. He was ordered to take twenty drops of tinct. thebaic. at night. The next day, a small spiculum of bone was taken out. The spasm and pain now left him, and he recruited again. The wound in his back healed in about ten days, and he had a second return of this affection, as alarming as the first; a similar treatment was pursued, which relieved him. On the 24th of December, he was sent to the general hospital, at Williamsville, in a convalescent state, having had no subsequent return of his paroxysm, and bidding fair to recover entirely.

Case 3.—A private, in the 9th infantry, had his radius broken about the middle, by a musket ball, which passed obliquely through the arm. He was admitted into the general hospital on the third day after the accident. The arm was then slightly tumefied and painful; only a common dressing, with splints, was applied to it. Between this time and the twenty-fifth day, frequent hemorrhages had occurred, which were commonly suppressed by a compress of square pieces of muslin, confined with a roller. The arm had become greatly tumefied, probably to three times its natural size, and a copious suppuration had followed, which relieved the inflammation and pain, but the patient's health was much impaired by diarrhœa and hectic symptoms. Opium and bark having been tried in vain, to arrest the latter, it was determined, on the thirty-fifth day after the accident, to take off his arm. I amputated it just below the insertion of the deltoid muscle. On the fourth day afterwards, I undressed it,

and was much chagrined at finding that the adhesions of the flap to the muscles had been prevented by a number of maggots finding their way through the dressing into the stump, notwithstanding every precaution had been taken to prevent such an occurrence. I cleared them out by injecting warm water and spirits of turpentine. On the fifth day, a new brood had come in, and insinuated themselves into the interstices of the muscles, producing considerable pain and irritation. The muscles had retracted, and left the bone jutting out about an inch, completely denuded of its periosteum. A very slight suppuration occurred. The patient's health became worse; for, besides an aggravation of the aforementioned symptoms, a comatose condition was present. I sawed off the protuberant extremity of the bone, cleaned the wound with warm water, and ordered the tonic and stimulating treatment to be strictly pursued. Nothing seemed to relieve him, and on the tenth day after the operation, and the forty-fifth from the reception of the injury, he died.*

Case 4.—John McGulrick, aged 45, of a dark complexion, and full habit, a private in 100th British regiment, 4th company, was wounded and taken prisoner at Chippewa, on the 5th of July, 1814. On the 7th of the same month, he was brought to the general hospital at Buffalo, with the rest of the wounded of the two armies. On examination by the superintending surgeon, the thigh was discovered to be fractured by a musket ball, about six inches above the knee joint. The limb was much swelled, and extremely painful from the bandage applied in the first dressing being stiffened with blood, and too closely rolled. He was ordered to live on light food, have the limb frequently moistened with lead water, and secured with a bandage and splints. A dressing of cerat. simp. was used.

In consequence of the great number of wounded, the surgeons and mates of the general hospital were unable to attend to all the patients, and it became necessary to employ some of the neighboring practitioners. It fell to the lot of this man to be placed under the hands of one of them, and I did not see him again till about the middle of October; I am, therefore, unable

* This case is inserted in order to show the effects of local irritation on a stump.

to say what treatment was pursued in the interim; from circumstances, however, I am induced to believe it was not of the most judicious kind. About this period, the services of the aforesaid practitioner being no longer wanted, he was discharged, and the soldier placed under the care of my assistant, Dr. Coltrin. On visiting the patient, he was struck with the peculiarity and precariousness of his situation, and was sensible that the preceding surgeon had not done his duty. The case presented such difficulty that he requested assistance.

Oct. 16th. We visited the patient in concert, and found the following symptoms: He was reduced almost to a skeleton, there being little else but skin and cellular substance on his bones; his pulse quick and feeble; a wasting diarrhœa had been on him for several weeks; he was subject to profuse sweats at night, and had no appetite. To these general symptoms was added a most unfortunate condition of the broken limb. The thigh was shortened about four inches, in consequence of the extremities of the broken bone being allowed to pass each other; the orifices, where the ball had entered and made its exit, were still open, and discharged daily a large quantity of thin semi-transparent pus; a fistula was found running nearly up to the trochanter minor, and a large ulcer had formed on the sacrum from continued lying in one position.

Weighing all these circumstances, we were not slow in pronouncing an approaching dissolution: had our opinion been otherwise, we should have determined immediately on amputation. There seemed so little chance for the patient's life, that nothing else could be done but to pursue vigorously the tonic plan; this we did, more from a sense of duty than from hopes of success. He was ordered to take Peruv. bark four or five times a day, and also a pint of port wine.

℞. Kino. gr. xv. To be taken three times a-day.

It was too late to think of restoring the limb by extension and counter-extension, as an adhesion had taken place between the bones, and an artificial joint had formed. We, therefore, only directed the limb to be dressed with basilicon twice a-day, the matter to be carefully pressed out of the sinus, and a spiral roller, with a compress on the fistula, to be applied from the

foot to the groin. The ulcer on the back was dressed also with basilicon.

This treatment was persevered in, with the addition of bitters, till the 1st of November, and with no amendment on the part of the patient; we, however, were pleased, and thought him fortunate in not dying.

The patient adhering to life with such tenacity, made us agitate the propriety of amputation, and we almost made up our minds for it, but as he was in the same precarious situation, it was thought advisable to wait a few days longer, as they would probably determine his fate, or produce an amendment.

Nov. 5th. The same treatment continued to this date; the patient no better, diarrhœa and hectic symptoms rather more urgent. As a dernier resort, we this day determined on amputation; everything was prepared, and the knife placed in the hands of Dr. ——, hospital surgeon, who, not belonging to the hospital, as a mark of attention, had been invited to perform the operation. He was dissuaded from it by Dr. ——, of the —— infantry, also a visitor, who, forming his opinion from the present condition of the patient, without taking into consideration the preceding circumstances, denounced the operation as fatal to the patient, and involving the reputation of the surgeon; advising us, at the same time, to pursue the tonic treatment. But a full trial of that had been already made. I was myself inclined to believe, that the operation might probably be fatal immediately, or in a few hours afterwards: but as I considered it the only possible means of relief, and had maturely reflected on the advantages and disadvantages likely to result, it was with reluctance that I submitted to the opinions of the consulting surgeon for the present.

Dr. Coltrin and myself having both acquired confidence from seeing the happiest issue from amputations, under circumstances similar, but not so aggravated, determined, let the event be what it might, on performing the operation by ourselves, without consulting or letting it be known to any other surgeons; we accordingly proceeded to the operation on the

10th Nov. At this time the patient's strength was completely prostrated, the diarrhœa and hectic fever still continuing in all their force; the sores on the back and thighs were no better. The

limb was amputated about two inches below the trochanter minor; the patient lost but little arterial blood, and bore the operation beyond our expectations. He was put to bed and ordered T. Opii, gtt. xl.

Nov. 11th. The patient somewhat better, rested tolerably well last night, less troubled with the diarrhœa.

℞. Pulv. Cort. Peruv. coch. min., still to be taken four times a day, and Elix. Vitriol, gtt. xv., to be added to each dose. A pint of port wine a day continued. Allowed to eat any thing he fancied, which could be procured.

Nov. 12th. Rather better, medicine continued.

Nov. 13th. The symptoms considerably ameliorated, appetite excited, had but one stool yesterday, and one last night, nocturnal sweats less profuse, rested well, medicine continued.

Nov. 14th. Mending perceptibly; the first dressing was removed from the stump; it had partially united by the first intention, and was beginning to suppurate finely. The ulcer on the sacrum throwing out healthy granulations, and diminishing in size.

Nov. 20th. The patient much in the same state as on the 14th, except that the powers of life were so feeble in the sound limb, that a dry gangrene came on the big toe, and the two adjacent toes, being probably induced by the cold state of the atmosphere.

The extremity was cold and without perceptible pulsation, from the toes to the knee. The nurse was ordered to wash it twice a day with hot brandy, and apply a flannel roller from the toes to the groin; medicine continued.

Dec. 1st. The patient's health and strength considerably improved, appetite good. The dry gangrene still continued on the toes, without any effort of nature to separate the mortified parts; the heat of the limb was restored after a few applications of the hot brandy; pulsation perceptible in the anterior tibial artery. The stump and ulcer doing well, the latter nearly healed. We now considered the patient almost out of danger. Prescription of the 11th November continued.

Dec. 20th. The patient completely exempt from apparent danger, and convalescing rapidly. He had picked up a little flesh, his appetite good, diarrhœa and hectic symptoms entirely gone; but one or two stools in the twenty-four hours; the ulcer on the sacrum

healed, and the stump nearly so. Bark, Elix. Vitr. and wine continued.

Dec. 23d. The general hospital being broken up at Buffalo, this patient was sent, with others, to Williamsville, eleven miles off; no question of his recovery was then entertained, and the only unfavourable circumstance was the gangrene on his toes, which still continued, nature showing an indisposition to separate the living from the dead parts. He arrived at his journey's end without accident. The final conclusion of this case I have to be informed of, as I left the frontier the following day.*

Gun-shot wounds having got their name originally from a superstition connected with them, that is of their being poisoned or placed under some peculiar influence from the material projecting the ball, they have been considered as forming a class to themselves, and a special treatment was introduced, now to a great extent abandoned. If the term itself were laid aside, and we had a class of wounds called Projectile, surgical phraseology would be improved by accommodating it to the sentiments now generally entertained. The mere instrument of projection in its own nature has no influence, further than its special force, upon the body projected. At the present day, when steam is so much employed in navigation and in machinery; from the frequency of accidents from its explosion, we might, upon the principle of the nomenclature adopted, have a class of steam-shot wounds, and formerly there could have been one of balister-shot wounds. It is probably the more requisite to have a reformed nomenclature in the present day, because really great modifications have been introduced into the manner of inflicting wounds. The injury from musket balls formerly occupied almost exclusively the mind. Now artillery is so much used in combat, that its grape and its cannister shot figure largely. The projection of hollow balls calculated to explode at certain points, and by their fragments produce destruction, has also advanced much in use. And lastly, the modes of injury connected with the industrial pursuits of society, (as the disrupture of

* The amputated part of the os femoris is now in the Wistar Museum, and presents a striking example of the effort at union by callus thrown out laterally.

machinery, and the tearing and crushing of railroad cars,) stand much in the category of projectile wounds, though not exactly according to our pre-conceived idea of them. The whole of the preceding category belong in their phenomena to wounds resulting from laceration and contusion blended together. The entire train may indeed be said to commence with the buckshot used in the American service, and to end in the explosion of the radiating fragments of a bomb shell, or in the most extreme form of railroad accidents. The injury from the first is very insignificant, unless it touch a vital part, as the brain or a large vessel; while the injury from the two last, though falling upon parts easily spared from the system, yet come with such destructive violence, that the system is unable to rally from it, and hence death is most lamentably frequent, without our being able to point out any very intelligible cause. We call it, however, a *shock* to the system.

If it were in preceding times difficult to give a formula, which represented universally the progress of wounds from projectiles, (gun-shot,) and the exact mode of treatment, that difficulty it is seen by the above is much augmented, at the present day. The enquiry has therefore to be made conformably, and resolves itself as follows:

The circumstances of force and resistance, being the same in both instances, what are the phenomena attending the entry and exit, or lodgement of spherical shot or bodies, connected with the material forming the latter? What of angular bodies, made so by design or by explosion?

How is their passage modified by the various degrees and angles of resistance?

What are the most appropriate dressings in each case?

What are the different constitutional effects?

What are requisitions for amputation, and at what time after the injury should it be performed? This is perhaps the most important and pressing question of modern surgery; from the revolution, I say, which has taken place in the projectiles of modern warfare, and in the use of transporting and of manufacturing steam machinery. Its paramount interest is seen every day. Formerly a stump, either in arm or in leg, was one of the rarest of sights in our streets, and was sure to obtain attention from its infrequency; now it is so

common that we do not think of it in passing. A death after an amputation was formerly scarcely looked for except from the general condition of the patient at the time; now it is one of frequent occurrence. The question, therefore, has been most forcibly elicited, what are we to do with limbs extensively crushed and lacerated? Are they to be cut off before re-action—are they to be cut off upon re-action—are they to be left as we find them, and to await the sanative process of nature, which will cause to slough off a part whose life can no longer be retained? Or are we, in case of restoration being hopeless, to make a simple muscular resection of the part, at the point which is the most disjointed from the rest, and to leave the resection of the bone and its squaring off, for a future time? It is impossible for any one man to find in his own experience a solution for all these questions, but a collective attention of the profession from all quarters of the world, in making a simple report of each case, would enable us to see whether the existing rule of speedy amputation is to be observed; or whether a new state of things, by its greater frequency of occurrence, may not invite to another rule of practice, by affording a higher and a more discriminating experience.

In hopes of eliciting from other quarters their own experience, and by that means obtaining a total revision of the ground of surgery in its relation to wounds inflicted by projectiles, I shall now proceed to present my own observations and conclusions.

In regard to the lighter conditions of projectile wounds, the following phenomena and proceedings may be stated:

When a wound is first inflicted, say by a musket ball, because it is the most frequent cause of injury, a round hole is made, into which the surgeon can easily introduce his finger: in twelve or twenty-four hours an inflammation and tumefaction take place in the walls, or circumference of the wound, which close it up so completely, that a small probe cannot be introduced without force, and without giving a pain to the patient. I mention this latter, because theoretical writers on the subject talk of introducing their bullet forceps, and extracting a ball with the same facility as they would extract a ball from a large auger hole.

I saw at the period in question a pair of bullet forceps, from an instrument maker, for the army, who, no doubt, acted up to this

idea, nearly as large and long as a pair of small fire tongs, and which no experienced surgeon would ever think of employing on the living body. In a vast majority of cases, no instrument larger than the common dressing forceps could be used in extracting a ball: they answered every purpose to which instruments of this kind could be applied. They are long enough, and if any objection to them can be found, on trial, it will be invariably as to their bulk, which might, with great advantage, be diminished for this purpose. When I first began to dress gun-shot wounds, and extract balls, I laid hold of the common bullet forceps, and attempted to introduce them into the wound, in which I seldom succeeded, for two reasons; the first was, because it was impossible to do so, without dilating the wound with a scalpel; and the second, because few patients will allow the excessive aggravation of pain which their unwieldly size occasions. After unavailing efforts with them, till my own patience, and that of the patient, was exhausted, I commonly finished the business with the dressing forceps.

If any person will take the trouble to compare a pair of bullet forceps, of that period, with the bullets used in our service, he will find that the diameter of the extremity of the forceps is nearly equal to the diameter of the ball; so that, admitting it practicable to insert the forceps into the wound, and to pass them along its channel till the point reaches the ball, it will then be necessary to stretch the wound to twice its diameter before the blades of the forceps can be passed over the ball, and include it in their grasp; after which the whole length of the wound is to be stretched in the same manner, in extracting the ball, and that to the very great misery of the patient. The common dressing forceps are objectionable on this account, but less so than the others, because their points are tapering and thin, and, therefore, occupy less room; and as regards firmness of grasp, it is sufficient to extract a ball out of any soft part in the human frame.

To return to the progressive condition of wounds: the tumefaction and inflammation, of which I have before spoken, generally continue, with little variation, till the fourth or fifth day; from that time a secretion of pus takes place from the walls of the wound, which continues to increase for several days, and sometimes it becomes very profuse. This secretion of pus cleanses the wound, and

terminates the inflammation and tumefaction, commonly about the tenth or twelfth day. It is at this period that it is practicable to extract the ball, and pieces of clothing, which may not have been attended to at the first dressing; the wound has now a gaping orifice, and the dressing forceps may be introduced. If it be delayed much after this time, granulations rise up and close the orifice. We can then only trust to nature for expelling those foreign bodies, and it is seldom that she does not, sooner or later, bring them to the surface.

Major General Brown presented an instance of the injurious effects of portions of clothing remaining in wounds. At Bridgewater a musket ball entered somewhat in front of the trochanter major and passed out over the inguinal glands. He suffered for three weeks from inflammation and suppuration; became better, and leaving the southern shore of Lake Erie, was accommodated in an armed schooner off the Fort. He then relapsed, with great irritation and discharge of matter, which continued until a piece of woollen pantaloons carried in by the ball, was discharged. The wound then soon healed, he resumed the immediate command of the troops, and consummated his military reputation by directing the sortie of Sept. 19th.

Not an unusual point of discussion, is the comparative size of the place of entrance and of departure of a ball. It will be impossible to find a rule on this subject because the proposition is variable. If a ball pass through a part with a velocity not materially impaired, the hole for its exit will be the larger from its imperfect support in being made, but it will be found generally that the point of exit is a simple laceration, the edges of which come almost or exactly together. Cases of this kind are met with when the ball is so far expended in force that it does not penetrate the clothing a second time, but is caught by it and drops down into the boot or shoe.

The sloughing of wounds is described by many writers in such a manner as to produce the belief that the parts injured by the ball are separated from the living parts, and come out, in pretty much the same way as the lining would from the sleeve of a coat. I never saw this, or any thing like it; if a sloughing does take place, it is insensible, and so dissolved in pus, that nothing of it can be seen. Occasionally parts of the fascia and of the cellular substance are detached, but there is nothing like muscular flesh.

I should myself be more disposed to describe the process as a deliquescence of the contused parts, than a regular sloughing.

From the tenth or twelfth day, the secretion of pus gradually diminishes, granulations arise quickly, and the cicatrix commences from the circumference of the wound, contracts and advances to the centre; when it has nearly closed up, the further progress of the cicatrix is frequently checked, and it remains stationary for some time, in consequence of a small button-like fungus, which shoots up considerably above the surface of the wound. If this fungus is touched once or twice with lunar caustic, it disappears, and the wound is completely healed, generally between the 20th and 30th day. Gun-shot wounds seldom bleed much at first, or indeed at any period of their course.

I often had my fears excited by the accounts of secondary hemorrhage, proceeding from the sloughing process involving the large trunks of arteries. It is true, this event does take place sometimes, but I think it one of comparatively rare occurrence.

The discharge from a gun-shot wound is, for several days, of the most fetid and intolerable kind, and while the deadened flesh is coming away, this discharge is of a black color, mixed with yellow; it soils, very much, the dressings, and they cannot be washed clean without a great amount of labor. Owing to this we could scarcely keep a bandage in use for more than one dressing. But the expense of this profusion was very serious, from the scarcity of woven fabrics and the high price of cotton which had to be transported inland on wagons from South to North, in consequence of the strict blockade of the sea-coast. The existence of war precluded the introduction of supplies from abroad, through our sea-ports.

(To be continued.)

Experimental Researches applied to Physiology and Pathology.

By E. Brown-Séquard, M. D., of Paris.

(Continued.)

XXI.—On Muscular Irritability in Paralyzed Limbs, and its Semeiological Value.

Marshall Hall has published many papers, in which he has tried to prove that the degree of muscular irritability in paralyzed parts may be used as a means of diagnosis between *cerebral* and *spinal* paralysis.

He calls *cerebral* paralysis that in which the paralyzed part is deprived of the action of the brain, but not entirely, or not in the least, of the influence of the spinal cord. On the contrary, he calls *spinal* paralysis that in which the palsied part is altogether deprived of the action of both the brain and the spinal marrow. The cause of the cerebral paralysis may be seated either in the encephalon or the spinal cord; and the cause of the spinal paralysis may be seated either in the spinal cord or in the nerves.

In the same individual these two kinds of paralysis may exist together. Suppose a man in whom the brachial enlargement of the spinal cord is considerably softened, and consequently unable to act; the upper limbs then have a spinal paralysis, and the lower limbs, receiving their nerves from a healthy part of the spinal cord, have only a cerebral paralysis.

According to Marshall Hall, the cerebral paralysis is attended by augmented muscular irritability, and the spinal paralysis is attended by diminished irritability. He bases this opinion on the following experiments, and on some clinical observations.

On six frogs he divided the spinal marrow immediately below the origin of the brachial nerves; and he removed a portion of the ischiatic nerve of the right posterior extremity. He had immediately, or more remotely, the following interesting phenomena:

1st. The anterior extremities alone were moved spontaneously; both posterior extremities remaining entirely motionless when the animal, placed on its back, made ineffectual efforts to turn on the abdomen.

2d. Although perfectly paralytic in regard to spontaneous motion, the left posterior extremity, that still in connexion with the spinal marrow, moved very energetically when stimulated by pinching the toes with the forceps.

3d. The right posterior extremity, or that of which the ischiatic nerve was divided, was entirely paralytic, both in reference to spontaneous and excited motions.

4th. After the lapse of several weeks, whilst the muscular irritability of the left posterior extremity was gradually augmented, that of the right was gradually diminished,—phenomena observed when the animal was placed in water through which a slight galvanic shock was passed accurately in the direction of the mesial plane.

5th. Strychnine being now administered, the anterior extremities and the left posterior extremity, or that still in connexion with the spinal marrow, became affected with tetanus; but the right posterior extremity, or that severed from all nervous connexion with the spinal marrow, remained perfectly placid.

6th. Lastly, the difference in the degree of irritability in the muscular fibre of the two limbs was observed, when these were entirely separated from the rest of the animal.

After this exposition of the results of his experiments, Marshall Hall adds: "In a word, the muscles of the limb paralyzed by its separation from both cerebrum and spinal marrow, had lost their irritability; whilst those of the limb separated from its connexion with the cerebrum only, but left in connexion with the spinal marrow, not only retained their irritability, but probably possessed it in an augmented degree.*

It is easy to prove that Marshall Hall has been completely misled by his experiments.

It is well known that the more a muscle is excited, the more it contracts. As the degree of irritability is judged by the degree of the contraction, it follows that to know what is the degree of muscular irritability we ought to apply the same excitation to the muscles we desire to compare. In his experiments with galvanism and with strychnine, Marshall Hall has not done so. He has applied galvanism, so as to excite much more the muscles of the left side united with the spinal cord, than those of the right side.

The muscles of the left side were excited:

1st. Directly by the galvanic current.

2d. In consequence of the excitation of the motor nerves.

3d. In consequence of the excitation of the spinal cord, directly by the galvanic current, and secondarily in consequence of the excitation of the sensitive nerves.

So that the muscles on that side were moved not only by the direct excitation on them, but also by a reflex action, and in consequence of the direct excitation of the spinal cord.

As to the muscles of the right side, they were only excited by the small part of the galvanic current passing in them. During the

* On the diseases and derangements of the nervous system. 1841, p. 215.

first, and perhaps the second and the third week after the section of the ischiatic nerve, the muscles were also slightly excited by the motor fibres of that nerve, but after that time these fibres had lost their vital property, and were unable to excite a contraction in muscles.

From this analysis it results clearly that the mode of comparison of the two limbs, by the passage of a galvanic current, as it has been employed by Marshall Hall, could not decide in which side the muscles were more irritable.

The use of strychnine, also, could decide nothing in this question, because, as I have proved in a former article, this poison is not able to act upon muscles. It acts only on the nervous centres, and especially on the spinal cord. Therefore, the production of tetanus in one limb and not in the other, in the experiment of Marshall Hall, proves nothing at all as to the degree of muscular irritability.

To know what is that degree, it is necessary to separate the two limbs from the trunk, and then to excite directly the muscles. Marshall Hall has made this experiment, but he says nothing about the circumstances under which it was performed, and these circumstances were, as it will be shown, extremely important.

In my experiments, instead of dividing only the ischiatic nerve, I divided the four nerves going to one of the posterior limbs, of many frogs, in whom the spinal cord was divided immediately behind the roots of the brachial nerves.

I have found on the separated limbs of these frogs:

1st. That, at first, the muscular irritability was greater in the limb which had been deprived of the action of the spinal cord and of the brain, than in the limb deprived only of the action of the brain.

2d. That, at a variable time after the operation, the irritability was at the same degree in the two limbs.

3d. That, at last, the irritability became greater in the limb only deprived of the action of the brain, than in the other.*

* There is, in these experiments, a cause of error, arising from the existence on one side, and the absence, or, at least, a diminution in the other, of the vital power of the motor nerves; but the difference is trifling when the nerves are divided very near their entrance in the muscles.

The differences in the degree of irritability have been observed: 1st. By the degree of the contraction under the influence of the same excitation; 2d. By the duration of irritability.

I have found that during a time, varying much according to seasons, and to many other circumstances, the muscular irritability increases in the two posterior limbs in a frog operated upon as I have described, and that the increase was more considerable in the limb where the nerves were divided than in the other.

If we compare two frogs, one operated on as before, and another having only had a division of all the nerves on one of the posterior limbs, we find, a few days after the operation, that in the four limbs separated from the body there are great differences as to the degree and the duration of muscular irritability: 1st. The three paralized limbs have a greater irritability than the one not at all paralyzed. From the three paralyzed limbs the two in which the nerves have been divided have both the same degree of irritability, and more than the limb in which there was only what Marshall Hall calls a cerebral paralysis. 2d. The irritability has lasted longer in the two limbs in which the nerves had been cut, than in the two other limbs; and from these two, that in which there was a cerebral paralysis has remained longer irritable.

If we examine the irritability in the posterior limbs of two frogs, operated on as aforesaid, for ten, twelve, or fifteen days, then we find that it is nearly at the same degree in the three paralyzed limbs, and greater there than in the non-paralyzed limb.

If the comparison is made four or five weeks after the operation, then the non-paralyzed limb has a greater irritability than the three paralyzed, and, from these three, the one deprived only of the cerebral action has a greater irritability than the two others.

The same experiments made on other animals than frogs, i. e. on guinea-pigs and rabbits, have given like results. I shall publish the details of these last experiments in a special paper, in which I intend to examine the value of the clinical observations of Marshall Hall, R. B. Todd, Duchenne de Boulogne, and others. I will merely state here, that in many cases it is almost impossible to know what is the difference in the degree of mus-

cular irritability in a paralyzed limb, compared with a healthy limb, in a living man or animal. Galvanism and strychnine cannot give us any exact notion in this respect. I ought to add, that if we could know what is the relative degree of irritability in a paralyzed limb, we could not make use of that knowledge for the diagnosis of the seat of the alteration producing the paralysis. On the other side, we do not want to know what is the degree of irritability in order to establish such a diagnosis. It will be, almost constantly, easy to know whether a paralysis is a cerebral or a spinal one. The existence of reflex actions in the paralyzed parts, is sufficient to prove that there is a cerebral paralysis, and the absence or the slight degree of these actions will prove that there is a spinal paralysis.

The following conclusions may be drawn from the facts above related, and from others that I have not yet published.

1st. The degree of muscular irritability in paralyzed parts, becomes rapidly greater than in the healthy parts, but, after a variable length of time, it diminishes, and, as it is well known, it may disappear.

2d. The muscles deprived of the action of both the brain and the spinal marrow, become rapidly more irritable than the muscles deprived only of the action of the brain, but, after a certain time, there is also in them a more rapid diminution of irritability than in the others.

3d. It appears certain that the muscular irritability never disappears completely in parts deprived only of the cerebral action.*

4th. In certain cases of paralysis, and more particularly of the face, as after the removal of a large part of the facial nerve, the muscular irritability may exist for years, at least in rabbits and other animals.

5th. It is very difficult, and sometimes almost impossible, to know the relative degree of muscular irritability in healthy parts

* I have had a pigeon on which nearly an inch of the costal part of the spinal cord had been removed, and on which the muscular irritability in the posterior limbs, and a very great reflex power, have existed as long as I have taken care of it, *i. e.* more than twenty-seven months. I ought to say that there has been no re-union of the separated parts of the spinal cord.

compared with paralyzed parts, and such a knowledge could not be of a great semeiological value.

6th. The existence or the absence of reflex actions as a means of diagnosis between the cerebral and the spinal paralysis, has a much greater value than the degree of muscular irritability.

(To be continued.)

Defence of the Doctrine of Vital Affinity against the objections stated to it by HUMBOLDT *and* Dr. DAUBENY. By Dr. ALISON. Communication for the "Examiner" by S. A. LEWIS, M. D., Philadelphia.

The object of this paper was to fix attention on the great physiological discovery which has been gradually effected during the present century, of the mode in which certain of the elements contained in the earth's atmosphere, under the influence of light, and of a certain temperature, are continually employed in maintaining that great vital circulation, of which vegetable structure, animal structures, the air and the soil, are the successive links; and to point out that the most essential and fundamental of the changes here effected—particularly the formation of the different organic compounds in the cells of vegetables—are strictly *chemical changes*, at least as clearly distinct from any chemical actions yet known to take place in inorganic matters, as the vital contractions of muscles are distinct from any merely mechanical causes of motion; and justifying the statement of Dr. Daubeny that there appears to be a "power, residing in living matter," and producing chemical effects, in fact manifesting itself most unequivocally by the chemical changes which result from it, "distinct, at least in its effects, from ordinary chemical and physical forces."

But after having made this statement, Dr. Daubeny, according to the author of this paper, has thrown a degree of mystery over the subject which is quite unnecessary and even unphilosophical, by refusing to admit, and quoting Humboldt, who has changed his opinion upon the subject, and now likewise declines to admit that these changes are to be regarded as *vital*; both authors (as well as several other recent English authors) maintaining that as

we do not know all the conditions under which ordinary chemical affinities act in living bodies, we are not entitled to assert that these affinities may not yet be found adequate to the production of the chemical changes which living bodies present; and that until this *negative proposition* is proved, it is unphilosophical and delusive to suppose the existence of any such power as that to which the term vital affinity has been applied by the author of this paper and several other physiologists.

In answer to this, it is here stated, that as we cannot, strictly speaking, *define* life or vitality, we follow the strict rules of philosophy, in *describing* what we call living bodies, whether vegetable or animal, and then applying the term vital or living, as the general expression for everything which is observed to take place only in them, and which is inexplicable by the physical laws, deduced from the observation of the other phenomena of nature; that according to this, the only definition of which the term vital admits, or by which the objects of Physiology can be defined, Dr. Daubeny has already admitted, in the expressions above quoted from him, that chemical as well as mechanical changes in living bodies fall under the denomination *vital;* and that as the rule of sound logic is "affirmantibus incumbit probatio," and as it is just as probable *à priori*, that with a view to the great objects of the introduction of living beings upon the earth, the laws of chemistry, as those of mechanics, should be modified or suspended by Almighty Power, this author maintains that we are as fully justified in referring all great essential chemical phenomena which are peculiar to living bodies, to peculiar affinities which we term vital, as Haller was to ascribe the peculiar mechanical movements of living bodies to the vital property of irritation; and to throw on the mechanical physiologists of his day the burden of proving, if they could, that the laws of motion perceived in dead matter were adequate to explain them.

In illustration of the importance, both in Physiology and Pathology, of this principle being held to be established, Dr. Alison adduced two examples, *first*, the utter failure of the very ingenious theory of Dr. Murray to explain, on ordinary chemical principles, the simplest and most essential phenomena of healthy secretion; and, *secondly*, the now generally admitted inadequacy of any theory of inflammation, which does not regard a modification of the *affinities* peculiar to life, and here termed vital, as

the primary and essential change, in the matter concerned in that process.*

Dr. Alison's paper may be seen *in extenso*, in the Edinburgh Ph. Trans. 1851–52.

Delirium Tremens Successfully treated by Chloroform. By JONATHAN LETHERMAN, M. D., Assistant Surgeon, U. S. Army.

Francis Harvey, a Hollander by birth, is now, and for a long period has been, in the service of the United States; is forty-two years of age, weight one hundred and eighty pounds, is five feet seven and one-fourth inches in height, and measures thirty-eight inches around the chest.

This person had been absent from his Post for a few days in December, 1851, during which time he drank a large quantity of alcoholic liquors. This indulgence induced a severe attack of dysentery, which continued for five days after he reported sick on the 26th of December, and then entirely ceased.

Upon the subsidence of this disease he was seized with well marked symptoms of delirium tremens. The day following his recovery he was perfectly sane. During the previous night, however, he was slightly wandering in his mind, yet not to such a degree as to require sending for me. But during the night of January 1st, 1852, I was called up to see him, and, upon visiting the Hospital, found him trembling violently, having a great dread of injury, and a sensation as if a serpent were in his head and breast. He was fearful of every one who came nigh him, but when informed who I was his fear of me much abated. His pulse was frequent and weak, his eyes infected with contracted pupils, and his countenance exhibiting a vacant stare. A large dose of tincture of opium was ordered. The following morning, finding him nothing improved, I directed porter and laudanum at intervals throughout the day, and also the compound infusion of Cinchona.

During the week ending January 9th, this treatment was continued, except, that finding the failure of opium and stimulants in combination, these articles were ofttimes given separately,

* Jamieson, Edinburgh N. P. Journal, October, 1852.

attention being given to the diet, which was generous, and to the organs of digestion. The patient, during this period, occasionally experienced a slight sleep, or, more properly, a stupor, after having taken a large opiate and stimulants, but it was so slight as to be of no service and totally unrefreshing. The trembling and fear of injury disappeared, but he was constantly annoyed by the idea (of the truth of which he seemed fully impressed) of animals in his head and breast, now of large beasts, now of serpents. Notwithstanding the subsidence of some of the symptoms, the patient at this time was no better. The tongue was coated and the pulse frequent and weak. Blue pill was directed, and Brandy ℥ij., Tinc. opii. gtt. 60, aq. ℥ij. was ordered every fifteen minutes until the patient should begin to experience sleep. This latter prescription was continued for seventeen hours, and although he was somewhat more tranquil, he yet had no sleep, and I could not pronounce him better. On January 10th the principal symptoms persisted, and I directed Brandy ℥ij., Tinc. opii. ℥ij., aq. ℥ij. to be given every half hour until he should exhibit indications of sleeping. This was administered during the day, but produced not the desired effect. In other cases I had used opiates and stimulants in combination and with success.

From the 10th until the 16th of the month, the unpleasant symptoms would somewhat abate after the administration of large doses of laudanum, but, upon the withdrawal of the drug, or the diminution of the dose, he would relapse into his former condition. As yet he had no refreshing sleep. On the 16th, Porter ℥ij., Tinc. opii. ℥ij., Chloroform gtt. xx. were directed every hour, to be discontinued should any indications of sleep appear. The day following he was a little better, but had not slept. The directions of the 16th were enforced, the laudanum excepted. On the 1st of February the patient had slightly improved, but yet had slept none. Whilst taking chloroform he was a little better, yet not sufficiently so to be satisfactory; had wandering pains in his head and breast. Ordered chloroform ℥i. in two ounces of water every 4th hour, porter ℥iij. every 2d hour. After the administration of the chloroform the pain in the head was relieved, the whole system rendered quiet and composed, and, for the first time during a period of five weeks, the patient slept well throughout the night. Very shortly after the first dose of

chloroform was given emesis occurred, but a sinapism to the epigastrium relieved all disposition to vomit, and it happened no more.

Under this treatment the patient rapidly improved, and excepting an attack of intermittent fever, a disease which is rife in this country, nothing intervened to retard his recovery. On the 25th of February he was considered able to undergo the exposures incident to frontier service, and was consequently reported for duty.

He continued well until the first of March, when his desire for liquors, which at that time was uncontrollable, again led him astray. He was reported sick to me on the evening of March 3d, and I found him affected with delirium tremens, having the "feeling as if the devil were in his head," and headache. Directed three cups to nucha, and one drachm of chloroform, and left, with orders to be called should any untoward symptoms appear during the night. He felt much relieved after the application of the cups, and slept through the night. The succeeding morning he complained of his head, had a slight fever, no appetite, and a coated tongue; notwithstanding, he was better. Directed Tincture of Valerian half a drachm every 4th hour, and a drachm of Chloroform every 4th hour, commencing two hours after the Tinc. Valerian. The morning following the patient was perfectly sensible; bowels regular, appetite good, and had slept well throughout the night. The Tinc. Valerian was omitted and chloroform alone given in gradually diminishing doses until the 7th of that month, when he ceased to take any medicine, and was again returned to duty on the 15th. On the 21st he left the Post with his company and marched forty-seven miles to a station farther in the interior of the State.

This man has been in the habit, for some years, of occasionally indulging to excess in alcoholic liquors, and had he not been endowed with a vigorous constitution, would doubtless have long since paid the penalty of such excesses. His case interested me much by reason of its severity, its long duration, and the total failure of opiates and varied stimulants, administered separately and in combination, in affording relief. The failure of the preparations of opium was not to be attributed to a want of being given in quantities sufficiently large, for they were administered,

not by the ordinary doses, but regulated according to their effects as much as possible.

The quantity of chloroform first exhibited was too small. At that time, and for some time afterwards, I was not aware that it had ever had been given in this disease, and was induced to direct it from the effects I had noticed in other diseases. It then failed in procuring sleep, yet it caused a perceptible improvement, and I then took into serious consideration the propriety of largely increasing the dose, and the probable effects thereof. At that juncture, I received the American Journal of Medical Sciences for the 4th quarter of 1851, wherein I was much pleased to see the record of a case in which it had been administered with profit in larger doses. I had no longer any lingering doubts, and gave it in such doses, and the result was gratifying in the extreme.

That it was the remedial in this case can scarcely be doubted, and should any doubts exist as to its efficacy iu the first attack, its influence in the second can hardly be questioned. The minor details of treatment have not been given, as the object has been to contribute additional testimony to the value of chloroform in this disease, in controlling which it has acted so speedily and so well.

Attention was given to the different organs of the body, and remedies from time to time were administered to keep them, so far as possible, in a healthy condition.

This man is now in the enjoyment of robust health, and has been so for many months.

Since I treated this case, I have used this drug in several cases of this disease, and, with one exception, it answered my expectations fully. It has brought relief, when opiates, instead of diminishing, added to the evil influences of the disease.

Fort Meade, Florida, Dec. 1st, 1852.

Speculations on the Nature of Tubercular Consumption. By DINWIDDIE B. PHILLIPS, M. D., Assistant Surgeon, U. S. N., Member of Acad. of N. S., Philad.

If in offering for publication the following speculations regarding the nature of Phthisis Pulmonalis, the writer is sufficiently fortunate to engage the attention and invite the aid of abler minds to the investigation of the subject, he will be duly repaid for the time devoted to its examination.

He does not pretend that he has undoubtedly discovered the true pathology of this disease, or an infallible and ever-present cure; but having been induced to adopt his opinions, from what to him seems a preponderance of evidence in their favor, he offers them to the members of the medical profession, to be by them received or rejected, as their wisdom may dictate.

The most which we can learn in relation to the pathology of Phthisis, as treated of by the multitude of medical writers, amounts to but little more than a candid confession of ignorance upon the subject. We are told that it is the result of an abnormal and morbid state of nutrition; that its cause and nature are alike unknown. And when we review the various and conflicting plans recommended for its treatment, and behold the almost innumerable host of heterogenous medical compounds which have been from time to time lauded as the great elixirs of life to the suffering patient, it would seem that any systematic attempt to investigate the nature of the disease, and philosophically oppose its invasions even, although visionary and erroneous, is at least preferable to an entirely lethargic and empirical guesswork, and should therefore claim an indulgent and charitable consideration.

Mr. John Simon, in his work entitled "General Pathology," gives the following description of tubercle:

"Microscopical examination of tubercle shows the following principal ingredients: 1st, a substance which constitutes distinctively the bulk of the gray granulations, and which in its general character is *identical with the matter of condensed fibrinous concretion*; namely, a dense, transparent, and almost homogeneous stroma, soluble in acetic acid and in the alkalies; 2d, granular material often in overwhelming abundance, especially in the

yellow tubercle, (where it is superadded to the former constituent) and consisting partly of fibriniform granules, partly molecular oil; 3d, aborted cytoblasts, dark, condensed, mis-shapen, angular, insoluble in acetic acid."

May we not assume, that the sum and substance of the tuberculous condition consists in a precipitation of unduly oxygenated fibrinous elements from the blood, from immediately exciting causes?

Let us see what arguments or facts can be adduced to sustain such an opinion. Mr. Simon, in treating of Cyanosis, uses the following language:

"There is one signal peculiarity which attends this chronic venous condition of the blood, and which I must not leave unmentioned. Not only in extreme cases of Cyanosis, but in all chronic diseases, where, from any causes whatever, there is defective arterialization of the blood, the patient enjoys one privilege. He is exempt (perhaps absolutely, but, at least, *all but absolutely* exempt) from tubercular diseases. And as the circumstances which interfere with due arterialization of the blood are of the most various kinds (some of them acting merely mechanically,) so we are justified in inferring from the exemption just specified, that the condition of the system in which tubercle is deposited is incompatible with venosity of the blood."

Now, there is one peculiarity of venous blood which alone can account for the singular fact stated above. Venous blood is much less prone than arterial to deposit its fibrin. This fact is demonstrated by post-mortem examinations; which always, (or nearly always,) exhibit fibrinous concretions or deposits in the arteries and left side of the heart, whilst the veins and right side are free from them. Mr. Simon also proves the difference in the facility with which arteries and veins give up this element of their composition. He says, (in the work before alluded to,) "I have carried a single thread by means of a very fine needle, transversely through the artery and vein of a dog, leaving it there so that it might cut the stream, and I have done this repeatedly, sometimes in the femoral vessels, sometimes with the carotid and jugular, sometimes with the aorta and cava. I have suffered the thread to remain during a period of from twelve to twenty four-hours. My experiments have given me, as a uniform result, that the arte-

rial blood, with the utmost readiness, deposits its fibrin on the thread; the venous blood with the utmost reluctancy."

Thus, then, the only condition in which the system seems perfectly exempt from the tuberculous deposit, is that in which, from want of proper arterialization, or oxydation, the blood refuses to part with its fibrin, or else does so with greatest difficulty. Again, in noticing the favorite locality of tubercle, we find it originally commencing on the lungs; here the blood is necessarily more highly oxygenated than in any other portion of the body, and here per consequence, its first attack is made; and not only in the lungs, but, by preference, in the superior lobes of the lungs. This arises from the fact that, as a general rule, the upper part of the chest is less frequently exercised than the lower, and the circulation in that particular portion, becoming languid and stagnated, as a matter of course fibrin is there first effused. Comparatively speaking, consumption rarely attacks individuals whose occupations cause them to make free use of the muscles of the upper part of the thorax, whereas, it is of common occurrence with those who pursue sedentary occupations, and whose respiration is carried on chiefly by the diaphragm.

It was formerly charged that tight lacing was a prolific cause of tubercle in females. Dr. J. M. Allen, (Professor of Anatomy in Pennsylvania College of Medicine,) has informed the writer, that he has frequently examined cases where this evil habit had been carried to very great excess; and that although the subjects, previous to death, presented every appearance of a scrofulous diathesis, yet, to his astonishment, instead of finding the lungs filled with tubercle, he has universally found them sound and healthy. He accounts for this upon the principle, that the stricture upon the diaphragmatic portion of the chest, produced a necessarily increased action of the muscles upon the upper portion, and that through this means, the circulation there was rendered more active, and tubercle warded off.

It is hoped that no one will infer that the pernicious and abominable practice of tight lacing is for one moment advocated; far from it, but, as it sometimes happens, that one evil may point out a remedy for another, so in this instance, we are taught that one of the best prophylactics against anticipated consump-

tion consists in moderate, but frequent, exercise of the arms and superior portion of the chest.

Formerly, fibrin was thought to constitute the great pabulum from which the healthy tissues of the body were nourished and repaired; now, however, it is generally conceded to be a retrograde condition of albumen, and of but little use in the economy. To those who still maintain the former opinion, a theory of the kind here advocated will probably appear idle and unsatisfactory, but to others, the views herein presented—defective and imperfect as they are—may, at least, seem to claim some shadow of plausibility.

In speaking of the treatment of Phthisis, it is proposed only to hazard a few conjectures upon the influence of some of the most prominent remedies which have been, and are still, recommended. One of the most favored, and probably most effectual, remedies in use is the Oleum Morrhuæ. This probably acts by furnishing fatty matter to unite with the oxygen of the blood in the generation of animal heat, and thus neutralize any excess; preventing an undue accumulation of super-oxygenated fibrin, and preventing a consumption of muscular and nervous tissue; the iodine and bromine contained in it also acting beneficially, by promoting, softening and absorption of any concretions already formed. The iodide of potassium and nitrate of potassa, with the other alkalies administered, may also do good by rendering the fibrin of the blood more soluble, and less liable to precipitation and coagulation; but in order to produce this effect they should be given in large doses, so that some portion of them may be retained in the circulation, otherwise, they will soon be eliminated and carried off by the kidneys, without exerting any salutary influence. Nutritious and unirritating food, by building up the general system, serve also to lessen the quantity and improve in quality the fibrinous elements of the circulation, and by contributing tone and strength to the economy enable it for a longer time to withstand noxious influences of any and every kind. Removal to a warm climate may act in two ways: 1st, by creating revulsion of excitation from the lungs to the liver; next, by affording less oxygen than would be contained in an equal volume of air respired in a colder atmosphere.

Exercise, as a prophylactic, has been before mentioned; it is

also highly efficacious as a remedial agent. It should be of such kind as to call into action the muscles of the superior portion of the thorax and, in fact, all that are in anywise, directly or indirectly, concerned in respiration; and its beneficial influence is much enhanced by making it of such a nature as to be agreeable and pleasant instead of forced and obligatory. Riding on horseback has been most highly extolled by many, its action being probably due to the partial fulfilment of the above recommendation, by using the hands, arms, and shoulders, in the government of the animal, with the veins, and also by improving digestion and increasing the general strength. Cases are on record, where persons, who despairing escape from so hopeless a malady, and perfectly reckless of consequences, have engaged in pursuits of the roughest, and apparently, most injurious nature, and who, after travelling on horseback or on foot, and performing real manual labor, have, to the joyful surprise of their friends, entirely recovered from their dangerous condition, and become both strong and hearty. Sailors, soldiers and others, engaged in occupations of similar physical necessities, although much subject to inflammatory affections of the chest, are in general less prone to tubercle than those whose condition in life would apparently better protect them from its ravages.

There are many remedies prescribed and used of a palliative nature, but it is scarcely necessary to mention them in an article of this kind; the limits of the treatise and time for its preparation, both forbid a more extended examination of the subject. The ideas here advanced have been hastily (perhaps too hastily) prepared and presented; but should they induce investigation, or cast any light, however small, upon a disease as obscure in its nature, as dangerous and fatal in its consequences, the highest hopes of the writer will be more than realized.

CLINICAL REPORTS.

Pennsylvania College, Ninth below Locust street. Service of Professor GILBERT.

Reported by W. H. GOBRECHT, M. D.

Nov. 20th. CASE XXXVIII.—*Congenital Teleangiectasy. Remarks, History of Case and Operation.*—This is an unnatural expansion in the capillary vascular system, producing, sooner or later, swellings which have their seat in the skin alone, in the subjacent areolar tissue alone, or in both, but rarely extends more deeply. It may be *congenital* or *non-congenital.*

The color of the tumor is quite red when the arterial capillary dilatation is the greatest; or it is bluish when the venous implication is in excess.

These tumors enlarge and pulsate, giving a *crawling* sensation, even to the patient himself. And after a time, when a great size has been attained, hæmorrhage occurs from the rupture of some spot in the thinned skin, which, however, closes again, this hæmorrhage recurring frequently.

The tumor is composed of enlarged and convoluted capillaries held together by loose areolar tissue, and perhaps cavities filled with blood.

The causes of Teleangiectasy are obscure; it is usually congenital, and is met with on all parts of the surface of the body, but especially about the cranium and face, the skin of which is highly vascular.

Teleangiectasy is essentially a local disease, and hence local appliances must be looked to in effecting a cure. These are varied in their character, and may be thus principally enumerated:

1. *Compression.* Successful only in very slight degrees of the disease.

2. *Destruction*, with the actual and potential cauteries, when we have subsequently an ordinary granulating and suppurating sore.

3. *By producing sufficient inflammation* in the Teleangiectasic tissue *to obliterate the vessels*, by vaccination, punctures, &c.

4. *By tying the principal supplying artery.* This is not so effectual as other methods, being, in great part, palliative in its character.

5. *By extirpation*, either with the knife, or by strangulation with the ligature. The use of the knife is not always safe, on account of the vast number of bleeding orifices which we create, from which alarming hæmorrhage will most assuredly ensue, if the tumor be large. If, however, this plan is employed, we must cut wide of the pulsating mass and in the sound tissue.

Having said thus much, the case of the patient was brought to the notice of the class. John G——, from Ireland, aged 20, has been affected since his birth with an erectile tumor of his lower lip, which, small at first, has increased with his growth, and still increases. It involves at present the skin, mucus membrane, and subjacent areolar tissue from a little to the right of the median line of the lower lip to somewhat beyond the left angle of the mouth. The gums in the immediate vicinity are deeply involved, and bleed often. The tumor is bluish red, thick, pouting, indefinitely circumscribed, and merges somewhat into the cheek above the oral angle; it also gives us the crawling pulsation, and can be emptied, in great measure, of its contents by pressure. It is stated that spontaneous hæmorrhage frequently occurs.

On carefully manipulating the tumor we can trace the main trunks of supply to the facial arteries, which vessels are found to be much enlarged. And inasmuch as the tumor itself is so extensive and involves so much important tissue, we shall give the preference, at least for the present, to the operation for the *ligation of the facial artery* upon *each side*, which is the fourth method of treatment detailed in the preceding remarks. The operation was then performed as follows:

The patient being seated, the jaws were firmly closed and the anterior edge of the masseter muscle found on the left side, whereby the exact course of the artery, and the proper position for ligation, was known. An oblique incision, one inch and a quarter in length, was now made in a direction downwards and forwards from the edge of the belly of the masseter to a little below the base of the jaw and anterior to the muscle; by these means were cut, the integument, superficial fascia and m. platysma myoides. The artery was then exposed and separated from the facial

vein, which lies upon its outer side, by means of forceps whose blades were fashioned into a form similar to a curved needle, the blunt extremities of which grasped the ligature, which was passed from the outside toward the median line, and then firmly tied. The same operation was performed upon the right side, and after the conclusion of these the pulsation ceased, and the size of the tumor had much diminished.

27th. The tumor is found to be smaller, and pulsation less evident than prior to the operation. Incisions nearly closed, but ligatures still retained.

CASE XXXIX.—*Contusion of Right Arm.*—George D——, aged 50. This injury, which exists upon the outer aspect of the right arm, was caused by a box weighing 800 lbs. falling some two feet and striking the patient at the point indicated. This occurred some two weeks since, the integument being unbroken; upon the third day after, swelling commenced, which progressed, accompanied with pain and redness, until an abscess formed; this was punctured some 48 hours back, and about half a pint of pus evacuated, since when the cavity has been contracting and the quantity of discharge is diminishing. The injury inflicted by this box, similates that of a spent cannon ball. The force being applied obliquely to the part, disorganized the areolar and muscular structures beneath without any external wound; inflammation was set up within, and abscess formed to get rid of the destroyed tissues, which act as foreign bodies, besides being too extensive for absorption alone.

Mrs. L., (Case XVI) who had a finger amputated for obstinate flexion, is presented, and the stump shown to have healed perfectly.

CASE XL.—George A——, aged 18. This patient *stepped upon a needle*, which breaking, left a fragment in his foot, whilst crossing the floor, protected by his stockings alone, the usual cause of such accidents. Pain is evinced upon pressure at one point of the sole, but as this is deep, it is not deemed advisable to cut down into it, but rather to elevate the limb, poultice the foot, and await the formation of an abscess around the foreign body, with the contents of which it will be discharged.

CASE XLI.—*Nævus Maternus*, in Mary Ellen B——, aged 22 months. This is one of the forms of congenital Teleangiectasy, consisting of an enlargement of the capillary vessels in and beneath the integument. It was first noticed as presenting the appearance of a minute scratch; since then it has enlarged gradually to its present size, which is that of a split filbert, placed upon the left ala of the nose. The proper plan of treatment, it was stated, will be to remove it without delay, which was done thus: An incision was made around the tumor, in the sound integument entirely, a straight needle was then passed beneath the base of the erectile mass from above, downward and backward, which was elevated by raising its extremities, and a surgeon's needle, carrying a double ligature, passed beneath the mass and the transfixing pin, at right angles to the latter. The two extremities of the respective cords (after the bight of the ligature had been cut) were tied firmly beneath the straight pin in the track of the integumental incision on their respective sides, the knots lying opposite each other, and the pin withdrawn. The color was now found to have changed from a bright red to a dull, bluish white. In two or three days we will find that the tumor has sloughed away, from the abstraction of all its sources of vascular and nervous supply.

24th. The tumor has become detached, and a freely granulating surface presents itself, which was touched with argent. nit. to repress an exuberant tendency which existed. The isinglass plaster was applied.

Nov. 24th. CASE XLII.—*Varus of right foot, third degree*, which occurred in a male child now aged 11 months. The operation for the cure of this affection, was performed during the last winter before the class, in the child's fifth week, by dividing the tendo Achillis by Hypodermatomy, and applying a steel sole, and leg bar for the outside of the limb, the method of employing which is given in the Examiner for December 1852, p. 785. The child is shown as presenting to us almost perfect relief from the deformity, but as there is a slight tendency to the inversion of the foot, a stiff and high gaiter has been constructed with whalebones in its outer side, which will retain the dorsum in its proper relation to the axis of the limb.

CASE XLIII. *Reducible scrotal hernia, oblique descent.*—Danl. S——, aged 25, states that when in his 19th year, he strained himself, as he supposes; about two weeks after this time, a tumor presented itself in the right groin, which could be made to disappear on pressure. He has worn a number of trusses, differently constructed, but could never continue them for any length of time; the tumor consequently gradually increased in dimensions, and eventually descended into the scrotum. On examination, it is found that the recumbent posture, with slight manipulation, reduces the mass entirely, especially if we relax the muscles concerned by flexing the thigh of the affected side on the pelvis, and carrying the knee to the opposite limb. Hull's truss was then applied. This instrument is thought by Prof. Gilbert to be the best, inasmuch as its construction is the least complicated; it is therefore less liable to get out of order, and can be more readily repaired should it do so, besides which it answers effectually all the indications as an easy retentive appliance. Simplicity being here, as in other instances, the best test of usefulness.

Remarks on the subject of hernia in general, and the varied means of diagnosis, were also made in conjunction with the presentation of the case.

CASE XLIV.—Mary G——, aged 37. *Contusion of shoulder and side*—produced by stumbling and falling upon a stairway. The patient had not fracture of the ribs, since there was no local *catch* in a long inspiration, and no crepitation. The motions of the humerus were proper. Treated with the application of volatile liniment and a bandage to the thorax and arm.

CASE XLV. *Abscess beneath fascia lata of left thigh.*—Ellen C——, aged 8 years. This patient was brought to us for advice several weeks ago. She then complained of pain at the upper part of the thigh, which was tender to the touch. There being also lameness, it was supposed that there might be incipient Morbus Coxarius. The Tinct. of Iodine was prescribed as a local application. The Comp. powder of Jalap ordered as a purgative, and rest enjoined. To-day, we have a further development of the case, viz., tumor, which exhibits its true condition. We shall, however, defer any decided measures until the next Clinical day.

Dec. 1st. The left thigh presents a prominence just outside of the median line of the limb, and about 2½ inches below the groin; this gives fluctuation, though perhaps rather obscurely. If pus exists here, as we think it does, a timely opening should be made to prevent the infiltration of the tissues, which would certainly occur, beneath the firm fascia which binds them down so closely; and this puncture we should not neglect, as is often done, for fear of the great vessels, until a large collection of pus results. If the incision is made at the proper point outside of the axis of the limb, and in a line *parallel* with the great vessels, very little is risked. A puncture was accordingly made at the point indicated above, and about two ounces of watery and curdy discharge, with a few drops of blood, followed. The wound was dressed with dry lint and adhesive strips.

4th. No discharge to-day at all; adhesive strip applied. There is much less pain in the thigh.

Nov. 27th. Daniel D——, (Case XXXII) previously exhibited —returns with increased irritation of the lachrymal sac, resulting from the epidemic Influenza, most probably. Creasote was re-applied. Pil. cathart. comp. No. III, were ordered—and the local application of the Alum curd directed, should the irritation run into an inflammation.

Dec. 11th. This patient has improved somewhat; there is no very apparent dryness of the nose; no inflammation of the conjunctiva at the inner canthus of the eye; there is not such frequent necessity of pressure upon the sac to empty it; and but a single tear, regurgitated by pressure with the finger of the manipulator, is clear and devoid of mucus admixture. Notwithstanding, however, these signs of palliation, Prof. Gilbert states it as his experience, that in cases of this character, we cannot hope to do more than bring the affection to a stand, and to keep it there by treatment, going on as they inevitably do, if neglected, to entire closure of the duct, finally resulting in fistula lachrymalis.

Dec. 1st. *Congenital varus* in an infant, exhibited. This is to be operated for upon the 8th inst.

Case XLVI.—*Strabismus* in a child aged 4 years, exhibited, with remarks upon its treatment.

Deformity of Neck from Burn, presented, with some history of the case. To be operated for, on 4th inst.

CASE XLVII. *Severe contusion of knee joint.*—Mr. M., aged 25, about eighteen months ago fell and injured the knee joint by contusion; from this, however, recovery soon occurred. Some fourteen months since, he fell and contused the same joint again, very severely. For this liniments were employed, and the patient confined himself to the house. Recovery, however, being delayed, medical advice was sought. As synovitis was evidently commencing, indicated by pain, swelling, heat, redness and inability to use the joint, Prof. Gilbert at first confined the patient to his bed, and applied the straight back splint, extending from near the pelvis to a point just above the heel, to prevent any motion, and employed repeated blistering about the joint, as a means of counter-irritation. These blisters were followed, upon healing, by Tinct. Iodine, pencilled over the parts. The Guano poultice was next used, and then blisters again, the leg being extended and motionless during the whole length of time; besides which a constitutional treatment, consisting of Bitartrate of Potassa and Jalap, as a revulsive, and Lugol's solution of Iodine as a sorbefacient, was instituted and persevered in.

By these means, some time in last May, seven months back, the natural size of the limb was restored, whereupon the ordinary *starched bandage* was applied, and the joint thus kept nearly motionless and extended, but the semi-recumbent posture was still enjoined. For the last two months the patient has been moving about upon the limb thus supported, perfectly free from pain, swelling, or unpleasant symptom of any description whatever, and is now attending to the ordinary duties in his shoe store in the city.

CASE XLVIII. *Contusion of hip joint.*—Salone T——, aged 14, was knocked off of a cotton bale, and falling, struck the left hip, about two weeks since. The case was properly diagnosed as contusion, by the practitioner who was called to attend him, and a treatment by cups and counter-irritants in the vicinity of the joint, established. As now presented, we find that the patient cannot elevate the thigh, without raising the knee by his

hands, and dragging the heel along the mattress, and this with some pain, whilst there is none of the preternatural rigidity of dislocation, nor the abnormal mobility of fracture, existing, the limb being of its proper length and capable of being made to fulfil its proper motions by external aid. Severe contusion evidently has been the cause of the present disturbance of the functions of the part, and may result in synovitis, which in any, but especially in this boy's constitution (scrofulous,) would be exceedingly disastrous, falling, as the case undoubtedly would, into Morbus Coxarius. To prevent any motion, therefore, a *starched bandage* was applied in the presence of the class, and the thigh and knee, respectively, placed in a slightly flexed position, were there secured by a long splint, to be continued until the consolidation of the bandage. When this has occurred, the firm case formed by it may be cut upon the inside of the thigh, and the sound side of the body; being then padded with cotton, as required, it is to be re-secured by turns of a roller, and worn for several months, the patient being confined to the recumbent posture.

Dec. 4th. The case is progressing favorably in every respect.

Dec. 4th. J. S. (Case No. VII,) Cataract, is again shown to-day, the operation for absorption having been repeated about two weeks since. The lens was then effectually broken up, besides which, the posterior layer of the capsule (having been recently involved) was divided. The opening thus formed acts as a second pupil, and the rays of light are concentrated upon the retina through it; therefore the patient can see not only light, but can distinguish persons from other objects, and tell how many fingers are held before him readily, without any aid from a lens. It is very probable that the presence of this new pupil, by regulating the rays admitted, will enable the patient to read without the aid of glasses. Discharged cured.

Case XLIX.—*Deformity of neck from burn, and operation for its relief.*—Hannah J. S——, of Kensington, aged 14 years, was severely burned, when 2 years old, by her clothes being accidentally fired. Burns are apt to be more severe in children than in adults, since, whilst the latter, with due presence of mind,

stand and subdue the flames by the most accessible methods, the former run wildly about for help, and increase the danger by fanning the flames, and igniting other parts of the clothing, which, but for this, would be, perhaps, untouched. The burn is, therefore, not only extended superficially, but deeply, and amounts, as in this instance, to the *third* or *fourth degree*, where the deep tissues are involved, and absolute loss of substance ensues. No doubt, had this child been somewhat older, more serious consequences still, if not death, would have ensued, from the reasons just given.

But the extent and depth of the burn are not the only difficulties which we have to encounter in the treatment and cure of such cases. No sooner are the sloughs thrown off by the process of ulceration, than very exuberant, large and flabby granulations are quickly formed, which, contracting, draw together the edges of the ulcer, like the mouth of a purse, and then skinning over, constitute a thick, uneven cicatrix, composed of what is termed *inodular tissue*. But the work is still unfinished. Interstitial absorption of this mass, if not previously set up, now commences, and thus the contractility of the tissue is again increased by these newly combined actions. As a consequence, very little new substance eventually exists in the space occupied by the burn; and that which is there becoming firm, hard and almost ligamentous, the contraction still progressing, the cicatrix is frequently raised from the substances beneath, especially if it have points of attachment, as upon either side of the flexure of joints, &c. In the case before us, the most serious portion of the burn seems to have been in the front of the neck, extending deeply; in consequence of which, all the steps in the cure, first described, have been successively established, and the great contractility of the cicatrix has approximated the lower jaw to the sternum in such a manner that all depression of the neck has vanished, the chin has been shortened and drawn backward, whilst the teeth project forward, away from the line of the arch of the upper jaw, and the head has a general inclination forward and downward, giving the patient a downcast look.

The long continued deformity has had the effect of measurably arresting the growth and expansion of the lower part of the face and jaw, and demands an operation, for the purpose of al-

lowing the progression of proper development and the production of unrestricted powers of mastication, as well as for the comfort of the individual and the relief of the unsightly deformity.

The patient being seated, a transverse incision was made with a scalpel on the anterior part of the neck, from right to left, about 6 inches in length, dividing the adventitious structure down to the normal fascia beneath, and the head extended, whereby the chin became instantaneously prominent. At a point some 2½ inches to the *right* of the extremity of the first cut, the scalpel was now made to enter the integument, and an incision extended downward on the shoulder 7 inches, then giving a rounding cut, it was carried up parallel with and 2½ inches from the first incision, entering the transverse cut at its *right* extremity.

The flap thus formed was dissected up from the muscles beneath, rotated to the left upon its base, and placed in the gaping wound produced by the separation of the lips of the first incision. Here, after the approximation of the edges of the wound in the shoulder in a like manner, it was secured by 16 fine steel needles, No. 12, and the twisted suture, with adhesive strips between them. Strips were also placed between their projecting extremities on either side and the integument, also superficial to them. The entire number of needles inserted both in the shoulder and neck was *twenty-two*, of which only *two* were of great size; one of these being placed at the angle of the shoulder and neck cuts, and the other on the shoulder itself.

The employment of a *number* of *small needles*, is an improvement on the old method of using fewer but of larger size, inasmuch as the irritation set up by the presence of the former, is not by any means so great as with the latter.

Very little blood was lost, and, although the operation from its extent was necessarily somewhat tedious, it was borne unusually well, by one so young. Anæsthesia was resorted to during the earlier stage of the proceedings, but was not employed thereafter. Patient retained at the College for subsequent treatment.

Dec. 8th.—Since last Saturday, (4th) the patient has fallen under the effects of the Epidemic Influenza, now so prevalent, which has complicated the case in a very serious manner. Distressing cough, which has a constant tendency to disturb the

union of the flap, exists, together with marked febrile symptoms of no favorable kind. The treatment to this time has been (on the 6th,) Mass. Hydrarg, gr. vj. followed in two hours by Calcined Magnes. ʒij

On the 7th she had dark, copious and fetid evacuations, after which some relief of all the symptoms was experienced. She was then given:

℞. Liq. Potass. Citrat. fʒviij.
Ant. et Pot. Tart. gr. j.
M. S. fʒss. every two hours.

The adhesive strips were for the first time removed on to-day, (the 8th) and re-applied. Union in about three-fourths of the lower border of the flap, being found nearly completed, ten of the needles were removed after the appliance of the plasters. Not much more than a fluid-drachm of pus has been formed up to this time. The fever has almost entirely subsided.

Dec. 18th.—Union by adhesion has been prevented, even in parts seemingly united by the first intention. The suppuration set up required daily dressings. On the 12th, all the needles were removed. The edges of the wound from which the flap was taken, were drawn about an inch asunder by the tension of the adjacent integument; and the extremity of the flap, by its own elasticity, parted to a like extent from its connection with the sound skin on the left side of the neck. By daily renewal of adhesive plaster, and the introduction of a suture at the extremity of the flap, the parts have been kept in apposition sufficiently well for favorable union by second intention, so that to-day (18th) the case may be reported as progressing very favorably towards union of all the parts involved in this very extensive and important operation.

Dec. 8th.—John P. (Case XXVII,) *Tenotomy.*—The wrist is now shown perfectly extended, although much restricted in its movements by the long confinement it has experienced. As the punctures have perfectly healed, and the tendons have doubtless united, the splint is directed to be frequently removed and passive motion given.

Case L.—*Congenital Varus of both feet, second degree,* in

George W. S——, aged 4 months. The tendo Achillis of each limb was divided by subcutaneous section in the usual manner, and the apparatus, whose description was given in Med. Exam. for Dec., 1852, (page 785, article, Adhesive Plaster in Surgery, by D. Gilbert, M. D. etc.,) applied as there directed.

Dec. 15th.—Apparatus removed and reapplied. The wounds have healed entirely, and the feet are nearly in their normal position. The progress so far is of the most encouraging character.

Dec. 11th.—A large *Tumor of the Neck*, in a female, was exhibited, and the history of the case given.

This person will be presented for the necessary operation hereafter.

Dec. 15th. CASE LI.—*Malignant Tumors beneath Lower Jaw.* —Mr. G——, aged 60, states that about a year or two since a scirrhous tumor was formed in his lower lip. This was removed, and the parts healed well afterward. Within the last four months, however, tumors have formed below the jaw and near to its angle; these are now about the size of a walnut, and have firm attachments to the surrounding tissues. As the removal of these tumors is strongly contra-indicated, the patient is advised to abstain from all cauteries and other irritating appliances, lest ulceration and more speedy death should ensue than if they were left undisturbed.

The ordinary reliable alteratives, however, may be employed, as Donovan's solution, Comp. Decoct. of Sarsaparilla, &c., but at best we can only palliate and endeavor to avert death by guarding against improper appliances of every description.

CASE LII.—*Polypus Nasi.*—George F——, aged 81 years, has a Polypus in his right nostril, which has been increasing for about two months. Several have been removed at two distinct sittings previously, by another physician. This, which was removed by torsion, was found to be of the mucous variety, and of moderate size. This case is worthy of notice on account of the polypus appearing, for the first time, so late in life.

BIBLIOGRAPHICAL NOTICES.

A System of Operative Surgery; based upon the Practice of Surgeons in the United States, and comprising a Bibliographical Index and Historical Record of many of their Operations for a period of two hundred years. By HENRY H. SMITH, M. D., &c. &c. *Illustrated by numerous steel plates—Parts 1st, 2d, 3d, 4th and 5th* (complete in one vol. 8vo., pp. 698, including index, and 80 plates.) Philadelphia, 1852: Lippincot, Grambo & Co.

In the publication of parts 4th and 5th of Dr. H. H. Smith's Operative Surgery, our readers will be glad to find the completion of his work. We congratulate the author upon the termination of his arduous task. He has good reason to rejoice with all concerned at the very handsome appearance of the volume of colored plates, in which the result of his labors has at last been presented to the public. We cannot discover that there has been any falling off in the preparation of the concluding portions, which it is our business now to notice. On the contrary, we are inclined to think that some improvement has been gained, at least in the coloring of the plates, if not in their general execution.

Part IV. is devoted to Operations on the Genito-Urinary Organs and Rectum. It is divided into five chapters, containing in all about one hundred and four pages, and illustrated by sixteen plates. The first of these chapters is occupied with operations on the male genito-urinary organs, and treats in different sections successively of the surgical anatomy of the parts concerned, of operations on the penis, on the urethra, on the spermatic cord, and on the testicle. Chapter 2d has for its subject, stone in the bladder; and in this connection it presents us with the surgical anatomy of the male perineum, and with the different operations of lithotomy. Chapter 3d discusses the operation of lithotripsy; and in chapters 4th, 5th, 6th and 7th, we find, in regular order of succession, descriptions and representations of operations on the female genito-urinary organs, operations for vaginal fistula, operations practised on the deep seated repro-

ductive organs of the female, and lastly, of operations practised on the rectum.

Part V. concludes the work with an account of operations on the extremities, in eight chapters and eighty-six pages, these latter being accompanied with sixteen beautifully engraved and colored plates. Chapter 1st of this part gives us, under the caption of general operations on the extremities, some observations on the operations for inverted toe-nail, for the cure of paronychia, for the cure of enlarged bursæ, for the relief of certain conditions of the nerves, onthe management of varicose veins, and on the operations of tenotomy. Chapters 2d and 3d describe the ligature of the arteries of the upper and lower extremities; chapters 4th and 5th treat of operations on the bones of the two extremities. Chapter 6th is occupied with general remarks on amputation; and chapters 7th and 8th are devoted to the particular amputations.

Of the thirty-two plates belonging to the concluding chapters just enumerated, the first four are occupied with the instruments employed in operations on the urethra, and with operations practised on the penis, urethra, and the testicle and cord. Then we have five plates devoted to the instruments and operative procedures required for the removal of urinary calculi, including, of course, the usual modes of operating by lithotomy and lithotripsy. Next in order comes a plate which represents a great variety of instruments employed in operations upon the vagina and the rectum. This is followed by four plates, intended to represent the different operations upon the female genito-urinary organs; by two plates exhibiting the operations practised on the rectum; by four plates, in which are shown the deligation of the arteries of the two extremities; by two plates displaying the different resections of the bones of the extremities; and lastly, by one plate presenting the instruments for amputation, and by nine, in which are figured the several amputations of these extremities.

So much for the topics of text and illustration which constitute the material of Dr. Smith's concluding parts. The very brief summary which alone we have been able to offer in this place, will serve, we trust, to show that they are fully equal, in the variety and interest of their contents, to their predecessors already presented to our readers. A careful scanning

of their pages, although, as a matter of course, bringing to our notice much that must meet with general approval, and more or less about which there might be a difference of opinion, has nevertheless suggested very little that was possessed of novelty or unusual interest enough to authorize any special comment. It may suffice to note in passing, that of the many well known operations with which the names of American surgeons are connected, he presents us in this portion of his work, among others, with figures and accounts of those for lacerated female perineum, introduced and successfully performed by Mettauer and Horner, for vesico-vaginal fistula by Hayward, Mettauer and Marion Sims, for recto-vaginal fistula by Rhea Barton, for ovariotomy by McDowell and W. L. Atlee, for Cæsarian section by Gibson, for extirpation of the uterus by Esselman and P. F. Eve, for encysted rectum by Physick, for excision of hemorrhoids by Horner, for fistula in ano by Gibson, for anchylosis by Rhea Barton and Gurdon Buck, Jr., and for the introduction of the seton in false joint or ununited fracture by Physick.

Under the head of perineal fistula we are glad to observe a description of the mode of operating which Dr. W. E. Horner has for a long time employed and recommended, but we cannot help regretting that the whole subject of stricture and perineal disease and injury is so hastily dispatched. The management of the prostatic and other portions of the male urethra involved in these perineal dyscrasies is so vitally important and has been of late so frequently discussed, that a few meagre paragraphs and a single operative procedure would hardly seem a fair proportion of attention to it in a systematic work which, notwithstanding the disclaimers of its preface, is manifestly offered as the first attempt at an embodiment of American Operative Surgery, and in which far less interesting questions are allowed to occupy a greater space. The same objection might be made, without injustice, and in some instances with much stronger reason, to other portions of our author's pages, in the earlier as well as later parts. Some of these short-comings are doubtless the result of haste in preparing for the press; or, as intimated in the preface, they could not easily be avoided in a book of plates without an inconvenient development of bulk; some of them arise, perhaps, from mere inadvertence of revision

—to which, by the by, must be attributed the lack of grammatical elegance and perspicuity of language observable in many places. But admitting, with a judgment of charity, that such accidents are excusable, and may not materially impair the standing of an authoritative work, we are still forced to conclude that some of his omissions and superficial modes of treating certain subjects are intentional, and the deliberate result of his particular views. What, for example, are we to suppose of the state of American aural operative surgery if we are to judge from the following cavalier disposal of it in the remarks with which the section on operations on the ear concludes?

"The almost universal necessity that exists in the United States for every surgeon to practise several distinct portions of his profession, as well as the absence of definite instruction in these complaints, usually noticed in the ordinary courses of education of our medical schools, has, for many years, induced the majority of the profession to shun the treatment of aural complaints, and forced patients into the hands of empirics. All the operations upon the ear are, however, so easily practised, and the character of the complaints requiring them so very limited, that this condition of things may be remedied by any surgeon. [!]

"In order to prove this, an effort has now been made to describe, as fully as is necessary, all the ordinary operations required for the relief of deafness, and if the reader will follow the description, in connection with the plates, he will, it is hoped, find them quite full enough. Pages have been written on most of these operations, but with the tendency to confuse and embarrass rather than encourage the reader. Washing out the external and internal auditory tubes, with perforation of the membrana tympani, or perhaps the mastoid cells, really constitutes the entire portion of aural operative surgery, and are certainly easily executed. [!!] The prognosis of the complaints requiring these operations is, it is true, often doubtful, or decidedly unfavorable; yet, it should be remembered that, even when unable to cure, a surgeon may effect much good by assuring the patient of the impossibility of his being relieved, and every operator should, therefore, gain such an amount of practical skill as will enable him to give an opinion. By washing out the meatus externus, and examining the condition of the membrane of the tympanum; by catheterizing the Eustachian tube, or by perforating the membranum tympani, and testing the permeability of the passage to the throat, as above described, much advantage will often be gained by the patient, whilst many persons will be saved from the hands of unprincipled men, who, in the majority of cases, only do them harm." [!!!] (pp. 219, 220.)

We do not believe in the necessity for exclusive devotion to the study of this or of any other department of surgical practice; and we would be sorry to admit the existence of such a lamentable state of ignorance in "the majority of the

profession," whether among specialists or not, in regard to diseases of the ear, as the foregoing extract would lead us to imagine.

Again, under the head of means of radically curing reducible hernia, we are treated to the following bright light on an old question.

"After the reduction of a hernia and the application of a truss, the patient is secure for the time from the danger of strangulation, and though it has been asserted that radical cures have been effected by the constant use of the instrument, inducing such adhesions and induration of tissue as plugged up the ring, my opportunities (and they have not been slight) have never enabled me to see one well grown adult who had obtained this result from the use of an instrument. In children and young persons, such a condition has been created as prevented the reproduction of the complaint for years; yet, even in these patients, the success has been far from constant.

"The most, therefore, that can be asserted of any truss is, that after its application, the patient is not liable to a descent of the hernia, provided it fits well, and is constantly worn. The manufacture and application of these instruments having, in many sections of the country, passed into the hands of ignorant men, professional evidence of the advantages resulting from the use of any particular kind of truss is rare. Some, I think, do more harm than good, and the surgeon should, therefore, make it his duty to examine the mode in which the truss is worn, as the instrument is often so badly adapted to the part as to increase the complaint.

"It being generally admitted that little or no reliance can be placed upon a truss for the accomplishment of the radical cure of hernia, several surgeons have endeavored to find some other means of effecting this important object. Most of these, though differing in the details, have had one grand object in view, and that is, the creation of such a condition of the parts as would effectually and permanently close the opening." (p. 413.)

This free and easy way of solving our doubts as to the radical cure of hernia by trusses, does not happen to agree with very respectable evidence against his confident assertion in our own country, and certainly does not accord with the very positive experience of European surgeons, as may be easily ascertained by reference to the works of authors of repute on both sides of the channel.

Once more; in the concluding paragraphs of his remarks on the lateral operation he thus disposes of the Gorget question.

"There are, however, many surgeons in the United States who do not use the gorget, preferring a beaked knife, of various shapes, most of which are apparently favorites, from having been designated by the name of the inventor. In many instances, such knives are only poor modifi-

cations of a gorget; they act in the same manner, but do not make so accurate an incision, and are liable to create an opening in the pelvic fascia by leading the operator to incise the prostate to too great an extent laterally. In a deep perineum, it is always difficult to judge of the position of the point of a knife, even when apparently directed by the left fore-finger; but with a staff held in the median line of the body, with its curve close under the pubis, and with the beak of a gorget well placed in it, it is impossible to extend an incision beyond the limits of the width of the blade. This subject is, however, one which has engaged powerful advocates on both sides, and I shall, therefore, dismiss it with the simple statement of individual preference for the gorget of Physick, though, at the same time, I should not hesitate to cut for stone with a staff and pocket bistoury, if nothing else could be obtained, nor doubt the possibility of a surgeon operating neatly and properly with any instrument when a correct anatomical knowledge of the structure concerned was made to direct it." (pp. 522, 523.)

Fortunately for the guidance as well as reputation of American surgeons, this same question, so far as substitutes for the gorget are concerned, is more fully, as well as modestly, discussed by the only other recent American writer—one who certainly enjoys the most extended reputation, at home and abroad, to say nothing of his numerous operations, and his long course of practice and teaching as a surgeon of the highest standing. Yet, although an opponent of the gorget, Dr. Gross, to whom we allude, does not allow us to suppose that even with his authority he would thus contemptuously treat the instrument which, old-fashioned and almost disused as it is, Dr. Smith chooses to style the type of all—the one *par excellence*—of which the different forms of knife constantly preferred by the first surgeons in the world are only so many poor modifications.

These quotations have been taken as we happened to be struck with them in looking through the book. We might add many others equally characteristic; but there is enough already to acquit us of unfairness in expressing the opinion which, as conscientious reviewers, we are forbidden to withhold, that our author does not afford such a "comprehensive view of the opinions, operative methods and instruments of those of his countrymen who have given to American surgery a character of its own," as the language of its title and preface would imply to be the grand object of his work.

We have not the least desire to quarrel with his individual opinions in regard to the theory and practice of his art, so long

as they are allowed to rest solely upon his personal responsibility, and to go for what they may be individually worth. But we cannot aid in presenting them to the professsion under the guise of a national authority, or even the prestige of a strictly native origin. Let the "system" to which they are attached be avowedly established on the "basis" of their author's individual opinions and experience, and not upon that of the "views of his own countrymen," or of the practice of American surgeons in general, and we will bow to his decisions with all the deference due to the superior advantages and opportunities which his seventeen years' devotion to his favorite branch has given to him. We are aware of the tendency of the "sovereigns" of our democracy to imagine their doings and sayings to be American, merely because they happen themselves, as individuals, to belong to the American nation. We know that we are all too apt, in our republican simplicity, to mean "I, the people," when we say "we, the people"; and our only hope in connection with this new competitor for national distinction is, that strangers as well as natives may not fall into the common error. Our friend's book, however creditable to himself and advantageous to us all, cannot afford us an adequate idea of the actual state of surgery on this side of the Atlantic. This could not be expected in its limited amount of space for letter press, and with its independent doctrines in regard to different subjects; while the very large preponderance of European illustrations and the number of operative precepts—nearly all the amputations for example—taken directly from the French, (see p. 665,) give it rather the aspect in some parts of a Parisian compilation. The materials for a genuine cis atlantic work may yet be had abundantly within the reach of those amongst us,—and there should be many such—who are competent and not afraid to use them. The task, however discouraging it may now appear, must sooner or later be fulfilled, without this resort to the enervating draughts from foreign sources, which of late years have been the curse of so many of our publications. No man need go to Paris or London now to learn how to amputate a limb or extirpate a tumor, resect a bone, extract a calculus—in short, to effect the greatest triumph which surgical art and science, under Providence, have ever yet achieved. Why, then, this never-ending slavery to the

parasitic feebleness which will scarcely allow us, without resorting to an unknown tongue, to show our pupils how to perform the simplest operation?

Let us not be understood in these remarks to be harboring any prejudice against the work before us, because it happens, from the predilections of its author and his peculiar opportunities, to savor more of European continental surgery than we are inclined to regard as needful in the United States. We have no intention to criticise his taste or judgment as singular in this particular connection, for we admit that he has only followed a prevailing fashion; and we can, and most cheerfully do, recommend his work, whether original and national or not, as the handsomest and most convenient atlas and illustrated outline of operative surgery that has yet appeared in this country, and therefore, one that must prove in a high degree valuable to students, teachers and practitioners. We can recommend it, too, as desirable and important in its influence on account of its many detailed reports of operations by American Surgeons, and of its bibliography; although this latter might have been made a little more complete in several places, without injury to the rest. But we do not venture to endorse it as an epitome or mirror, to use a popular term, of the operative surgery of our own land. Nor, do we mean to say that it is offered, or will be anywhere received as such; and we only have suggested the idea at the risk of making what may seem to be an invidious and gratuitous distinction, in order to clear ourselves, if possible, from the imputation which our notice of the first and second parts has placed us under of favoring such a view. We extended a cordial welcome, in spite of some misgivings at the outset, to an undertaking which bid fair to prove one of the most extensive that had ever been ventured on by an American publisher; and our regard and respect for the enterprise and energy of all concerned led us then, as they do now, to wish them the most flattering success. But we cannot leave them without expressing the disappointment which we sincerely feel, not only at the want of truly native hue in the compilations of the text, but at the almost exclusive preference manifested, in letter press as well as illustrations, wherever foreign aid is resorted to, for French works (and especially the superficial manuals,) to the more practical and

substantial productions of the British press. The book, as a specimen of printing and engraving, is most attractive in its getting-up, however; and, although it does not accomplish all that we would like to see effected by such a publication, it still goes far beyond anything we have yet known in its class, and gives us much more, perhaps, than, according to ordinary calculation, we had a right to expect.

A Practical Treatise on Diseases of the Skin. By J. Moore Neligan, M. D., M. R. I. A., Lecturer on the Practice of Medicine in the Dublin School of Medicine, &c. &c. Philadelphia: Blanchard & Lea, 1852. 12mo. pp. 333.

The Diseases of the Skin constitute an exceedingly important department of nosology, of which, with comparatively few exceptions, practitioners of medicine are lamentably ignorant. This want of knowledge does not depend upon any deficiency of publications upon the affections in question, for such are abundant in the English, French, and German languages, and many of them are accompanied with more or less faithful pictorial representations of the various eruptions described. The difficulty is ascribable partly to peculiarities connected with the diseases themselves, and partly to confusion in the modes of their classification and description. To most physicians they certainly present no special attractions; but, on the contrary, much that is repulsive, in their frequently unsightly appearance, and the not uncommonly disagreeable odor which they occasion. Moreover, they are usually the concomitants, and indeed frequently the result of poverty and filth, and consequently can contribute less to the social position or to the emoluments of the physician than most other complaints which are more equally visited upon all classes of mankind. Again, most of them do not so much interfere with the ordinary pursuits of their victims, as to induce them to resort early to means of cure. And in this country, particularly, there being no public institution for the especial treatment of skin diseases, clinical instruction upon them has never been attempted in any regular and methodical manner; hence young men enter upon the active practice of their profession with the most imperfect notions concerning the diagnosis, and with very empirical views about the treatment of them.

The learner might commence the study of these affections with more hope and zeal, did he see a greater degree of harmony prevailing among dermatologists with reference to the important point of diagnosis. But, inasmuch as the very same disease wears at different stages an entirely different aspect, it has received one appellation from this writer, and another from that; so that at the very threshold of his inquiries the student is perplexed and disheartened.

The two different bases for the classification of cutaneous diseases which are now most prominently presented, are the *artificial* and the *natural*, as they are termed. The first depends upon the specific form and appearances which the eruptions exhibit; the other upon the anatomical seat of the eruption, or, upon the immediate pathological lesion or modification of structure which it indicates. The first was proposed, as Dr. Neligan informs us, by Riolanus, revived by Plenck, and received currency and character from Willan, whose classification, in its essential features, is to this day regarded as the best adapted to facilitate the recognition of the diseases of the skin. The natural systems of classification are chiefly those of Wilson and Cazenave. Mr. Wilson adopts as the basis of his arrangement the anatomy and physiology of the skin, and makes four primary groups of the eruptions which appear upon the latter, viz:

1. Diseases of the Derma.
2. " " Sudoriparous glands.
3. " " Sebiparous glands.
4. " " Hair and hair follicles.

Each has several sub-divisions. M. Cazenave includes all cutaneous affections under eight classes, each of which is founded upon some pathological modification of the structure or properties of the skin, viz:—1, Inflammation; 2, Lesions of Secretion; 3, Hypertrophies; 4, Deteriorations; 5, Hæmorrhagiæ; 6, Lesions of Sensibility; 7, Foreign Bodies; 8, Diseases of the Appendages, embracing the hair and the nails.

If scientific accuracy alone were desirable in a nosological arrangement, as in the classifications of Natural History, it must be confessed that the system of Wilson, which starts from known and always verifiable data, would be the best for cutaneous diseases. But in the examination of these, facility of application

must be an important consideration in determining what mode of classification to adopt, and in this respect we cannot but think that the method of Willan possesses advantages over any "*natural*" arrangement yet proposed. It was originally open to serious objections, of course; but it has been of late years so much improved as to be not more amenable to criticism than those which have been advanced to supercede it. The chief objection urged against it is that the characteristic form of the eruption is subject to such changes,—the papule becoming vesicular, the vesicle pustular, &c., from accidental circumstances,—that it may be placed in every group but the right one. It rarely happens, however, that a careful examination will fail in detecting its proper and specific form.

The treatise of Dr. Neligan, which we have already cited by its title, advocates the Willanean system, with the modifications and improvements to which we have just alluded. The author says, "In proceeding to describe the classification of diseases of the skin which I intend to adopt, I wish, *in limine*, to disclaim any pretensions to originality. My chief object is to endeavor to simplify a subject which has often not received from the student and practitioner the attention it merits, owing to the difficulties with which complicated arrangements and even changing nomenclatures have invested it. I shall therefore take advantage of the labors of those who have preceded me, and endeavor to reduce the grouping together of cutaneous eruptions to as few sub-divisions as attention to accuracy will admit."

The arrangement which he adopts is exhibited in a tabular form, as follows:

Order.		Genera.
1. Exanthemata,	comprising	Erythema, Erysipelas, Urticaria, Roseola.
2. Vesiculæ,	"	Eczema, Herpes, Pemphigus, Rupia, Scabies.
3. Pustulæ,	"	Acne, Impetigo, Ecthyma.
4. Papulæ,	"	Lichen, Prurigo.
5. Squamæ,	"	Psoriasis, Pityriasis.
6. Hypertrophiæ,	"	Ichthyosis, Molluscum, Stearrhœa, Elephantiasis, Verruca, Clavus, Callositates, Condylomata, Nævus.
7. Hæmorrhagiæ,	"	Purpura.
8. Maculæ,	"	Vitiligo, Ephelis.
9. Canerodes,	"	Lupus, Keloïs.
10. Dermatophytæ,	"	Porrigo, Sycosis.

Supplementary Groups.

Syphilides,
Diseases of the appendages of the Skin.

The simplification is more conspicuous in the diminished numbers of the varieties included in each of the genera.

Thus, Erythema comprehends, in the arrangement of Dr. Neligan, three varieties: E. simplex, E. papulatum, and E. nodosum. Erythema simplex is made to embrace the E. fugax, E. læve, E. intertrigo, E. marginatum, and E. circinnatum of some other writers,—varieties which depend for the shades of differences which they exhibit upon some peculiarity of the skin in individuals affected, or upon the localization; but which do not present features so striking as to demand a specific designation.

Of *Acne* he makes but two varieties, calling them after Willan, A. simplex and A. rosacea, rejecting as not deserving special designation the other two varieties of the same author, A. punctata and A. indurata.

Again, he indicates but two varieties of Ecthyma, E. acutum and E. chronicum, instead of the more numerous varieties described by Willan and others, and which are separated from insufficient motives, as the age of the patient, the color of the eruption, and the constitutional cachexia.

In like manner, we might pass over all the orders and genera included in the classification of Dr. Neligan, and show that in almost all of them his pruning-knife has been judiciously exercised in lopping off supernumerary branches which can bear no good fruit for the cultivator of this field of pathological inquiry. We think that in general his modifications are improvements.

The descriptions which he gives of the different affections are sufficiently clear and precise, and the rules for diagnosis will materially assist in the determination of the order and genus to which any doubtful eruption should be ascribed.

He combines in his account, so far as can conveniently be done, the advantages of the natural and artificial system of classification, by not only describing the specific form and appearances of each eruption, but by also designating its anatomical seat and its pathological character. The descriptions are short and are in a great measure pathological definitions.

The treatment recommended is evidently the result of the

author's own experience, for it is advised decidedly, and very generally accompanied with an assurance of its utility. The treatment of diseases of the skin is fast losing the empirical character which so long tainted it, when the materia medica contained but three or four articles which any one thought of using in the treatment of cutaneous affections,—Sulphur, Tar-ointment, and Arsenic, to which might be added, from the practice of some one more ambitious than his fellows, mucilaginous baths. Were a physician of the old school of practitioners, one who had not kept himself informed of the improvements, introduced into the various departments of medicine, and particularly into the therapeutics of diseases of the skin, to be suddenly shown the long list of medicinal agents now to be chosen from, he would be struck with amazement at the change.

This department of the subject has occupied a large share of Dr. Neligan's attention, and to it he devotes perhaps the most considerable portion of his book. The details of the treatment of each eruption are given in immediate connection therewith; and in addition to this, the concluding chapter of the volume is consecrated to a review of the general and special therapeutics of cutaneous diseases. The reader will here find a great deal of valuable information upon this subject, together with numerous formulæ for lotions, baths, and for internal administration. The author's recommendations are based upon sound pathological and physiological views, and possess the essential requisite of being the results of his own careful observations. They are comprehensive in their bearing; having regard not to the mere name of the disease, but to the state and stage of the eruption, the peculiar departure from the normal condition of the skin at the part affected, and also of internal organs, and the constitutional condition.

To the beginner, and to the physician who wishes a useful and not voluminous manual to assist his examinations in cutaneous affections, we can highly recommend Dr. Neligan's book. Those who wish to study fully this interesting and neglected class of diseases must, of course, possess themselves of more extended treatises.

We regret to have observed, in perusing this volume, that the American reprint bears evidence of having been hastily passed

through the press. It contains very many typographical errors, which could have been easily avoided by greater care on the part of the *employés* of the printing office.

A Memoir of the Life and Character of JAMES B. ROGERS, M. D., Professor of Chemistry in the University of Pennsylvania. By JOSEPH CARSON, M. D., Professor of Materia Medica and Pharmacy in the University of Pennsylvania. Delivered by request of the Faculty, October 11, 1852, and published by the Class.

This elegant Memoir is a tribute in every way worthy of the subject; distinguished alike by the unaffected simplicity and refined earnestness, which were so eminently characteristic of the lamented colleague of the biographer.

There was much in the career of the late Dr. Rogers to elicit sympathy—especially in his long unrewarded struggles and premature demise, almost immediately after he had reached the goal; and Dr. Carson has delineated it with his proverbial good taste, and all the warmth of long attachment and close intimacy.

The life of Dr. Rogers offers points of much interest to the young aspirant for medical honors. He was emphatically a self-made man. And, when he finally attained the honorable and important post, which he filled for so brief a space, his promotion was strikingly the result of merit unaided by influence; and his selection by the Trustees, and approval by the Faculty of the University, was confessedly but the registration of "the earnest wishes in his behalf and the partiality of the profession."

Dr. JAMES B. ROGERS was born in Philadelphia, in 1803. He graduated in Medicine in 1822, at the University of Maryland, and, almost from the commencement of his professional career, devoted himself to the speciality of chemistry. His first appearance as a teacher was in the chair of Chemistry, in the Washington Medical College of Baltimore. From 1835 to 1839, he occupied a similar position in the medical department of the Cincinnati College. Upon the close of that institution, he returned to Philadelphia, and was soon afterwards engaged in the Philadelphia Medical Institute, where he continued for several years to lecture on the same branch. In 1846, he filled the chair of Chemistry in the Franklin Medical College, of this city, and in

1847, upon the resignation of Professor Hare, he was chosen, "after a spirited canvass," with great unanimity to succeed him. He filled this situation for five years with the highest popularity; when, shortly after the close of the last session, he fell a victim to an insidious disease, which, it appears, had been gradually but surely fixing its hold upon his constitution.

The subjoined feeling allusions of Dr. Carson to the moral attributes of his friend and colleague, will, we know, be responded to with singular warmth and unanimity by the profession and community of Philadelphia:

"He was an object of affectionate regard to those who knew his social worth. Disinterested and generous in his relations with the world, mild and conciliating in deportment, open and affable when approached, urbane to every one, his virtues shone conspicuously within the circle of his friends. With his pupils he was sympathizing; he entered cheerfully into their discouragements and difficulties; and those who confided to him, received that encouragement and counsel so grateful to the student's feelings. He was emphatically the student's friend. In his death, a sore bereavement has befallen us; and we may be permitted to give utterance to our sentiments of sorrow. The grave may conceal from view his mortal lineaments, but they are engraven upon our recollection. A portraiture, distinct and vivid, with all the freshness that affection can give to it, will ever be before our mental vision."

THE MEDICAL EXAMINER.

PHILADELPHIA, JANUARY, 1853.

The press of original matter in the present number, (much of which has been delayed from previous numbers,) has so circumscribed our space, that we must forego our usual salutation to our readers, on the commencement of a new volume. We must, however, express our acknowledgements for the steadily increasing support with which our editorial labors have been encouraged; and we may also briefly add, that we shall relax no efforts to maintain the position of the Examiner in every department—original, bibliographical, clinical, and selected. If the usual limits of the last have been somewhat curtailed of late, we trust that our readers have been repaid for the temporary omission, in the value of our original matter and the elaborate character of our bibliographical notices; and we beg to assure them that the abridgement of the 'Record' is only temporary.

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NOTICE TO CORRESPONDENTS.

Communications and Books for notice should be addressed to the Editors, care of Messrs. Lindsay & Blakiston.

Letters, &c., connected with the *business affairs* of the Journal should be addressed to the Publishers.

Papers for publication must be received *before* the 20th of the month, or they cannot appear in the forthcoming number.

The following Journals have been received in exchange:

American Journal of Medical Science. Jan., 1853.
Western Lancet. December.
New Orleans Monthly Medical Register.
Southern Journal of the Medical and Physical Sciences.
New Orleans Medical and Surgical Journal.
Medical Recorder.
Western Medico-Chirurgical Journal.
Union Journal of Medicine.
Medical News. Philadelphia.
Buffalo Journal.
New York Medical Gazette.
The Boston Medical and Surgical Journal. (Weekly.)
Stethoscope and Virginia Medical Gazette.
New Jersey Medical and Surgical Reporter.
Transylvania Medical Journal.
Southern Medical and Surgical Journal.
New Hampshire Journal of Medicine.
The London Lancet. (Weekly, London.)
The Medical Times and Gazette. (Weekly, London.)
Dublin Medical Press.
London Journal of Medicine.
Edinburgh Medical and Surgical Journal.
Journal of Psychological Medicine.
London Pharmaceutical Journal.
Edinburgh Monthly Journal.
Journal of Pharmacy.
North Western Medical Intelligencer.
American Journal of Insanity.

BOOKS RECEIVED.

Ricord's Letters on Syphilis. From A. Hart, Esq.
Silliman's Chemistry. From Publishers.
Quekett's Lectures on Histology. From H. Bailliere, Esq.
Animal Chemistry, by Dr. Bence Jones. From the same.
Notes on Carpenter's Physiology, by Dr. Mackall.
What to observe in Medical Cases. From Blanchard & Lea.
Kirke and Paget's Physiology. Second American Edition. From the same.

The foreign correspondents of the Examiner will please direct their Exchanges and other communications to the care of Mr. Thos. Delf, No. 21 Paternoster Row, London, or Mr. H. Bossange, 21 Bis, Quai Voltaire, Paris.

THE

MEDICAL EXAMINER,

AND

RECORD OF MEDICAL SCIENCE.

NEW SERIES.—NO. XCVIII.—FEBRUARY, 1853.

ORIGINAL COMMUNICATIONS.

Surgical Sketches. By W. E. HORNER, M. D., Prof. of Anatomy in the University of Pennsylvania, Senior Surgeon at the St. Joseph's Hospital, &c. &c.

A Military Hospital at Buffalo, New York, in the year 1814.

(Continued.)

In regard to wounds from grape and cannister shot, they are more torn, owing to the larger size of such projectiles. And from the greater momentum much more mischief is done in the laceration of the soft parts, and in the comminution of bones, than happens from musket balls. Such missiles pass straight on, and, except when the surface of the body or the limbs are concerned, they are for the most part immediately fatal, or in a short time. Musket balls, on the contrary, have their course very much varied by the material resistance they meet with in the different tissues and especially by the angle at which they strike. Hence it is not unusual for them to pass around a part one half of its circumference immediately under the skin, giving delusively the appearance of a wound through and through.

If the smaller spherical projectiles from cannon make terrible wounds, such of the latter as arise from the angular fragments of exploded hollow shot are still more formidable in the rent and destruction of parts, and there are still fewer recoveries from

them. Rail-way accidents and steam explosions produce a class of accidents very nearly allied to them.

I have said that in the lighter wounds, poultices were early dispensed with; the inflammatory symptoms were mild, and subsided as the discharge of pus increased. The local treatment in common use, was the daily washing of the wounds with soap and warm water, and a simple plaster of basilicon spread on patent lint. We were, however, frequently in want of the latter, and its place was tolerably well supplied by slips of the cotton muslin which we used for bandages. When the sores showed an indisposition to heal, they were washed freely with French brandy or with whiskey. The poultice of bread and milk, of flaxseed, or of slippery elm, was resorted to with great advantage in soothing the irritability and extreme sensibility of some wounds. Situated, however, as we were, milk was a scarce article, and the bread of an inferior quality. The cold water dressing, since so much eulogized, was not attempted except in the form of saturnine lotions. Having been in Paris in the celebrated outbreak there in June 1848, and witnessed the cold water dressings in several of the Hospitals, I can not say that I considered it equal in comfort and in efficacy in severe cases to the preceding well established routine of warm poultices. It may retard inflammation and also repress it, and in these two lights may do well; but another important indication in many wounds is to make provision for the tumefaction which follows them, and nothing relaxes rigid tissues with more certainty than hot fomentations and poultices. Any one who will try the experiment of treating a sprained ankle by cold applications alone, in contrast with large hot poultices, using in both cases leeching besides, will be convinced of the vastly superior efficacy of the poultice, and see that the treatment is abridged nearly one half in point of time by the use of the latter. On the occasion alluded to in Paris, it afforded me pleasure to perceive that the dressing of wounds in the wards of the Hotel Dieu, and of the Saint Louis, was still by the warm well made poultices, while the cold water fomentation or irrigation was almost exclusive in the Val de Grace, (a military hospital.) In the Neckar, the treatment was eclectic, some patients being dressed with cerate, spread on perforated linen, others with poultices, and others with cold water.

I have in a preceding place, alluded to the paramount interest attaching to amputations, and especially the period at which they should be performed. This question was for a long time considered as settled upon the authority of the leading surgeons of the French and of the British Armies, during the great wars at the beginning of the present century. They generally asserted their conviction in favor of amputation directly after an injury, instead of waiting for two, three or more weeks. The ancient doubts are now, however, beginning to revive, and the more recent statistics are received with no small attention.

The frequency of fatal results upon direct amputation leads to the inquiry necessarily, whether a severe operation upon the heels of a severe accident is not, however well performed, more injurious than beneficial to a patient, and whether, in view of preventing an ulterior harm, it does not produce an immediate mischief? Whether the true course in such cases would not be either to let the limb undergo the ordinary treatment of poultices, &c., or if the nourishment of it could not be kept up beyond the injured spot, to do no more than simply cut it off through the ray of connexion which it may have with the part above. In reproducing such ideas it is to be admitted that circumstances are to regulate, in a measure, the proceeding. When the patient can be placed at once in convenient quarters, the refraining from amputation has much to recommend it. But when he has to be transported roughly a great distance, the amputation of the thigh, or at least the immediate excision of the dangling part of the member, would probably be better than to leave all as the accident placed it. It appears to me that the leading inducement to many amputations immediately after injury is only the making of a better stump; but nature has great capacity in this respect, in the most unseemly injuries; and by her law if a bone protrudes beyond its limit of covering by muscle and skin, she in a few weeks, reduces its length to the proper mark by the process of exfoliation. This I have frequently seen accomplished when a spontaneous retraction of the muscles from the bone had denuded it.

Wiseman, surgeon to Charles II. of England, counselled that if there be no hopes of saving the member, the amputation should be done upon the receipt of the wound, before the patient's spirits

were overheated with pain or fever, his strength impaired by loss of sleep, and while he is still amazed, as it were, with the accident. Le Dran was of the same opinion, and especially in the case of wounded joints. Ranby, surgeon to George II. in the fore part of the last century, deriving his experience from the campaigns in Flanders, advised amputation on the spot, even on the field of battle. But the most prominent authority of the last century is Bilguers, Surgeon General to the Prussian Army under the great Frederick, who in 1762* published against amputation in general. He denied its necessity even when a limb was torn off by a cannon ball and the parts were hanging. With these views he permitted no amputations in the Prussian Army. The exposition of his success is that, having at one time 6618 wounded patients in hospital, 5557 were perfectly cured, 195 almost restored, 213 remained incapable of either military or civil labor, and 653 died. The 195 and 213 had their bones broken, that is 408, and of the 653 deaths, 408 were from fractured bones. There stand 408 saved without amputation, and 408 deaths also without it. He then says that if we compare the number saved without amputation, with the almost total loss of patients after amputation (only one or two escaping) out of a prodigious number operated on in the beginning of the war, we may safely conclude that the 408 saved would have been victims to the operation. Exceptions are taken to this conclusion by Mr. Guthrie, because Bilguer makes no account of the wounded who died upon the field of battle for the want of amputation. There is, however, such an immense difference between only one or two saved in the beginning of the war, and 408 saved under a new regulation, that if Bilguer speaks candidly and correctly the assertion is of great weight.

About the middle of the past century, (1756) the French Academy of Surgery made this subject a prize question, which was decided in favor of M. Faure, a military surgeon of experience. He adduced ten cases of experiment on delayed amputation, following the battle of Fontenoy in 1745, all successful, while his opponents brought forward only four cures, out of nine immediate amputations. Faure's eligible period for amputation

* See Guthrie on Gun-shot wounds.

was when the violence of the local inflammatory condition and the symptomatic fever had abated. He, however, permitted prompt amputation in some few cases, they being of the worst kind, and not admitting of any delay whatever. Faure informs us that of three hundred amputations upon the battle of Fontenoy, only thirty were successful.*

In 1792 this decision of the French Academy was reiterated by the Baron Percy in his Manuel du Chirurgien d'Armée. The celebrated John Hunter, says on the subject,† after excepting cases where there is danger of death from hemorrhage, and the blood-vessel can not be reached without amputation, that it is much better to wait till the inflammation, and all its effects with those of irritation be gone. And this caution he applies with marked emphasis to the lower extremity. But few, he says, can support the loss of a lower extremity when they are in full health and vigor. "We know that a violent inflammation will in a few hours alter the healthy disposition, and give a turn to the constitution, especially if a considerable quantity of blood has been lost, which will most probably be the case when both accident and operation immediately succeed one another." He reprobates decidedly amputation on the field of battle,‡ the motive for which must of course be to avert the inflammation of the part which would follow its neglect; but he says, that if the patient would be able to sustain the inflammation, a consequence of the accident alone, it is more than probable he would not be able to support the amputation and its consequences too. If chances are so even for and against the patient when amputation is performed under ordinary circumstances in life, how adverse they become upon a field of battle." We must confess that we consider these pregnant precepts in regard to military surgery, but too applicable to the more pacific, but no less terrible series of injuries resulting from railroads, the actual extension of which at present in our country, and their still further extension for the future, urges imperiously a sound rule for the guidance of every practitioner.

* See Larrey, Memoirs of Milit. Surg, &c., Balt. Edit. 1814. Vol. 2, p. 79.
† A Treatise on the Blood &c., p. 537, Phila. Edit. 1840,
‡ Ib. p. 538.

In an army, additional ease in travelling, and especially in a hostile country may be a motive for prompt amputation, but this can have only a limited influence in civil practice, and therefore ceases to be an argument. Mr. Hunter proceeds to say that few did well who had their limbs removed on the field of battle, while a much greater proportion have recovered upon amputation after the inflammation was over. He is, however, less scrupulous about prompt amputation of the upper extremity, or in any case when the limb holds by only a small connexion. My own doubts, I admit, extend even to the latter, and I sincerely desire that a proper test should be applied by experiments of a suitable kind. It can do but little harm when a limb is dangling, and with the bones comminuted, to resect the limb at the point of connexion, and then simply to square off the protuberant bone. By this forbearance, which is scarcely an amputation, we avoid a new invasion of parts already in a suffering state.

The introduction in the year 1782, by Mr. Alanson, of the plan of treating amputated limbs by procuring an immediate union of the flap with the stump, may be considered as giving the strongest impulse to the idea of prompt amputation after injury; it is said to have diminished considerably the mortality when compared with that of the preceding forty years. This is, however, a pure question of comparative treatment of amputation, in which the English and the French schools are still opposed. The intelligence and ardor of the latter do not admit of a doubt that they are governed in their own practice by the results or the convictions of experience, and not by a simple routine as is alleged by their insular Neighbors. But this question does not reach the fundamental one of the relative superiority of a prompt, or of a tardy, or of a delayed or remote operation, the great one for the present stage of civil surgery.

The instructed reader need scarcely be informed that English surgery has run exclusively into the practice of prompt amputation after an accident likely to produce final loss of limb; that the celebrated Baron Larrey has used his high influence in producing a similar practice in France; and that these two sources of authority have established the principle in American surgery. The opinions of our army surgeons in the war of

1812 all went that way, so far as we can learn, through the unfortunately too limited publications on that subject; and we presume that these opinions have been reproduced in the late Mexican war, though unhappily there are so few means of ascertaining the case. Notwithstanding this, we are yet constantly admonished by the frequency of death after immediate amputation, that if the practice be a sound one, it is at least very unsatisfactory in its general results.

Mr. Guthrie* makes what he considers a triumphant statement in favor of his own views for immediate amputation; to-wit: in 163 amputations of the upper extremities, five only died, the rest were cured or convalescent; of the lower extremities, 128 amputations, only nineteen deaths, the rest cured and convalescent. His average of success was, in the case of the upper extremities, one death to twelve recoveries, and in the case of the lower extremities, one death to three recoveries. In the delayed amputations in the British Hospitals for the last six months of the year 1813, one hundred and sixteen persons out of 296 died in the case of the upper extremities; and in the case of the lower extremities 149 out of 255, a loss of more than a third in one category, and of much above one-half in the other. By this it appears that nearly one-half of the wounded are lost in the delayed amputations, while not more than a twelfth are lost on the field of battle.

Mr. Guthrie presents a remarkable statement of the mortality attending amputations between the fourth and the eighteenth day, mostly of the thigh. Out of forty-six, forty died. One who has seen amputations at this period of gun-shot wounds, will not forget the horrific yells of the sufferer; and we must confess some surprise at the persistence of a surgeon who would progress through such a scene. His confidence must have been strong in the accuracy of his principles, and his solace is to be found in the statement following, that an equal number, not so badly wounded, but not operated on, also died. This occurred in a group of one hundred and fifty French soldiers, captured at the battle of Salamanca.

* On gun-shot wounds, p. 42. London, 1815.

† Loc cit. p. 59.

Mr. Hennen* is so firmly of the opinion above, that he considers it almost libellous to impute any other practice to English surgeons. The fact of its propriety is, he says, as firmly established as any in surgery, and that there is not one point where opinions have varied so little among English practitioners from Wiseman downwards. The statistics of Mr. Guthrie and the axiom of Mr. Hennen, have thus a strong contrast with the celebrated Prussian surgeon Bilguers, and with the deeply reflective mind of John Hunter. It is said that the Indians of the Rocky Mountains consider a few perforations with rifle balls or penetrations with arrows, as not a very serious matter; that they suffer comparatively but little inconvenience from such accidents. If vital parts are not struck they do not lay up, but let these missiles drop out pretty much as they can. All of which is stated to be due to the singular salubrity of the air. The air of a field of battle appears to have a similar protective influence upon the constitution of the British soldier, or else there are some qualifications in the condition of things which statistical tables fail to represent. We can scarcely doubt the sincerity of Mr. Guthrie's views, whatever may be the striking character of his reports. He certainly had great opportunities for experience when war was conducted on so extensive a scale. But whatever may be his convictions in regard to early amputation, he is decided in allowing the first moments of agitation to pass before the operation is performed. He admits a period of from one to six or eight hours in different individuals, but considers that from one to three hours will, in most cases, be sufficient.†

The great battle of Waterloo, fought on the 16th and 18th of June, 1814, left two thousand killed in the British lines, and eight thousand wounded; the number of amputations amounted to nearly five hundred, in more than one-third of whom the operations had been prompt. We are informed by a careful observer, who made his report on the state of the British Hospitals‡ in Belgium at the time, that the mortality among those where am-

* Observations, &c., on Military Surgery. Edinburgh, 1818, pp. 45, et seq.

† Loc. cit., p. 52.

‡ John Thompson, Regius Professor, &c. Edinburgh, 1816.

putation was not at all performed, and among those where it had been postponed, was so much in excess over the cases of mortality after the cases of prompt amputation, that many regrets existed among the army surgeons that primary amputations had not been more frequently performed. This axiom then of British practice, established on the most memorable occasion of modern times, has met with but little to disturb its ascendancy since, and may now, therefore, be viewed as the dominant doctrine of the profession there.

In a recent lecture by Mr. Guthrie,* his opinions previously expressed on the result of his Peninsular service, are reiterated in substance as follows, to-wit: Immediate resection when the limb is in a hopeless state. The exception being when the patient is so prostrated as to render it evidently hazardous at once to his life. A delay of from five to eight hours and the use of stimulants are then recommended. He considers amputations done within the first twenty hours, over such as are done after several days or weeks, so superior as to admit no longer of dispute. He appears, however, to omit the question whether amputations at any period have an advantage over no amputations at all. He admits that amputations below the shoulder joint downwards, and below the knee downwards, may almost always be done with safety, but the sooner the more sure. Amputations any where above the middle of the thigh have always considerable danger. The latter being, then, the really turning point of the enquiry, the question should first of all be settled, whether immediate amputation, delayed amputation, or no amputation at all of this part, be better; and as immediate or delayed amputation in the two other cases do not differ materially in their results, so incidental circumstances may direct the surgeon. But it may be doubted always, I say, whether the immediate repetition to the limb of a severe injury by amputation is likely to be so balmy, as the admission of a fair interval of time. I consider it highly inconclusive to group amputations by the limb instead of by the region of the limb, and still more so to speak of all sorts of amputations in a sum, without any analysis.

* See American Medical Journal, Oct. 1852, p. 530, from Lancet, May 1, 1852.

The surgeon most influential in obtaining the present professional conviction in favor of immediate amputation after injuries requiring the resection of the limb, is unquestionably the celebrated Baron Larrey.* His surgical life began in 1789, and was continued with great activity for the next twenty-six years, when the downfall of the Emperor Napoleon composed the disturbed state of Europe. In this long service he was the constant attendant of his celebrated master, and present at all his great battles as Surgeon-in-Chief. His amputations were sometimes fifty or sixty a day, and, on one occasion, amounted to two hundred. Seeing for himself to such an amazing extent, and receiving the most authentic reports from all quarters, it would be difficult to find elsewhere such an amount of information. It would appear that under his observation more than three-fourths have recovered, which he ascribes to a more correct appreciation of the time for operating, to more methodical dressing, and to a more simple and less painful process than in preceding times. His rule is, that when a limb is so shattered that it cannot be saved, amputation should be done in the first twenty-four hours.†

Immediate amputation is, however, far from being the universal doctrine of the French schools. The Baron Percy, as previously remarked, disallowed it in his manual for army surgeons, published, in the year 1792, but understood to have been well received at a comparatively recent date. And Blandin, so late as 1829,‡ leaves us with the same conclusions in regard to his sentiments.

The American surgeons, in the war of 1812, followed to a large extent the prevailing French and English practice of that period; among them we may mention Dr. Mann; yet he states that after the battle of Little York and Fort George, a less number survived primitive than consecutive amputation. Three or four, it appears, died immediately after the operation, whereas there was not a single case of death during the campaign (1813) occasioned by consecutive amputation § We regret that he has not furnished us with the results of more than thirty amputa-

* See Memoirs of Milit. Surg., passim. Balt. Ed. 1814. Translation by R. W. Hall, M. D.

† Loc. cit. p. 79.

‡ See Dict. de Med. et de Chirurg. Prat. Art. Amputation.

§ Medical Sketches, p. 213.

tions executed after the battle of the 11th of September, 1814, on Lake Champlain, rendered more memorable by the naval victory of Commodore McDonough. Dr. Amasa Trowbridge,* also an experienced surgeon of that time, and still alive, has given his testimony in favor of immediate amputation when there is no prospect of the ultimate restoration of the limb.†

In a valuable communication under date of April 30, 1851, from Dr. J. B. Whitridge, now of Charleston, S. C., and one of the U. S. Army surgeons of the war of 1812, he has furnished me with his views generally on the subject of amputation. Among other remarks he says: "According to my observations and experience amputation should always be performed as soon as possible after the accident or wound has taken place, which creates the necessity of the operation." He enjoys the reputation of a highly skilful and successful surgeon.

In the Naval fight on Lake Erie, September 10th, 1813, Dr. Usher Parsons,‡ the fleet surgeon, adopted the same plan of immediate amputation. The American squadron contained about six hundred, all told. The flag ship, the Lawrence, under Commodore Perry, had mustered in the morning one hundred men fit for duty. The action lasted three hours, and left at 3 o'clock P. M., twenty-one dead and sixty-three wounded, only sixteen unhurt. The whole number of wounded in the squadron

* This gentleman, though now at an advanced age, exhibits an unflinching energy in the exercise of his profession. His residence being in Watertown, in the northern part of the State of New York, he has enjoyed for nearly half a century a most prominent reputation as an operator. In recent communications from him, he reports ninety amputations of the thigh in private practice since 1809. Of the first thirty-five, only one died immediately after the operation; the remainder recovered from the operation, and continued to live for a well marked time afterwards. His report in detail was published in the Boston Medical and Surgical Journal. He lately performed his eighteenth operation (lithotomy) for stone in the bladder, this case terminating, as all the previous ones, in success. Of these, three were instances of foreign body in the bladder, one being a slate-pencil two inches long, one a piece of willow stick one and a half inches long, and one a bit of sealing wax two inches long and three-fourths of an inch in circumference. In thirteen cases of tracheotomy for foreign bodies, twelve were successful.

† See Boston Med. and Surg. Journ., 1838.

‡ See New England Journal of Med. and Surg., Oct. 1818, p. 313.

was ninety-six, of these, only three died; one from compound fracture of the shoulder, in which the bones were in part carried away, one from mortification of the lower extremity, and a third from fracture of the skull. The moral influence of victory was strongly illustrated in this engagement. It is known that the flag ship struck her colors; medical aid, the Doctor tells us, was then rejected, and the cry at once was, "sink the ship, let us all sink together." The translation of the Commodore to the Niagara, and the bringing of that ship into action, changed the fortune of the day, and shouts of victory immediately ascended. Its influence was seen in the remarkably few deaths of the wounded. Dr. Mann says that the same happy consequences attended the victory on Lake Champlain. The prodigious and glorious successes of the British arms in the Peninsular campaigns may account for many of the recoveries there also.

APPENDIX.

The following tabular statements on this subject may be presented with some advantage. In the Pennsylvania Hospital it appears from the report of Dr. George W. Norris, one of the surgeons,* that there had been fifty-six amputations from January 1, 1831, to January 1, 1838, a period of seven years, under the following circumstances:

Pennsylvania Hospital.

	Aggregate Amputations.	Died.	Recovered.	Accidental Amputations, or prompt.	Died.	Recovered.	Amputation delayed or from disease.	Died.	Recovered.	Total.
Thigh . . .	XIII.	6	7	VI.	4	2	VII.	2	5	13
Leg . . .	XVI.	9	7	IV.	1	3	XII.	8	4	16
Foot . . .	IV.	1	3	I.	1		III.†		3	4
Shoulder Joint .	II.	2		I.	1		I.	1		2
Arm . . .	VI.	2	4	IV.	2		II.		2	6
Fore arm . .	XIII.	2	11	VIII.	2‡	6	V.		5	13
Hand . . .	II.		2				II.		2	2
		22	34		11	11		11	21	56

*See Amer. Jour. Med. Sci. vol. 22, p. 356.

† Dr. Norris has not stated whether these were after prompt or delayed amputation.

‡ Two on same patient.

Pennsylvania Hospital from Jan. 1, 1838, *to Jan.* 1,1840.*

	Aggregate.	Died.	Recovered.	Prompt.	Died.	Recovered.	Delayed.	Died.	Recovered.	Total.
Thigh . . .	IV.		4				IV.		4	4
Leg . . .	X.		10	VII.		7	III.		3	10
Foot, partial . .	I.	1		I.	1					1
Arm . . .	VI.		6	III.		3	III.		3	6
Fore arm . .	III.		3	I.		1	II.		2	3
		1	23		1	11			12	24

In regard to the Massachusetts General Hospital, it appears from the Report,* including the amputations from January 1822, to January 1, 1850, that the aggregate had been one hundred and forty-six on one hundred and forty-one patients, thirty-two of which had died:

85 in consequence of disease, of whom 10 died, i. e. 1 in 8½ cases.
56 " injury, " 22 " 1 in 3 "

I have condensed the report into the following table:

	Aggregate.	Died.	Recovered.	Prompt Amputation.	Died.	Recovered.	Delayed. Amputation.	Died.	Recovered.	Total.
Thigh . . .	LXIX.	19	50	XIV.	7	7	LV.	13	42	69
Leg . . .	L.	10	40	XIII.	3	10	XXXII	6	31	50
Arm . . .	XI.	1	10	III.	1	2	IX.		9	11
Fore arm . .	XI.	2	9	V.	1	4	VI.		6	11
		32	109		12	23		19	87	141

* See Amer. Journ. Med. Sc., vol. 26, p. 36. Paper by Dr. George W. Norris.

† By George Hayward, M. D., one of the surgeons. See Boston Med. and Sur. Journal, Oct., 1850.

*New York Hospital.**

	Aggregate Amputations.	Died.	Recovered.	Accidental Amputations, or prompt.	Died.	Recovered.	Amputation delayed, or from disease.	Died.	Recovered.	Total.
Thigh . . .	XXXIV.	11	23	IX.	3	6	XXV.	8	17	34
Knee Joint . .	I.	1					I.	1		1
Leg . . .	XXIV.	7	17	XV.	6	9	IX.	1	8	24
Shoulder Joint .	IX.	4	5	VII.	4	3	II.		2	9
Arm . . .	XI.			VIII.		8	III.		3	11
Fore arm . .	XI.	3	8	VI.	1	5	V.	2	3	11
		26	53		14	31		12	33	90

It is to be regretted, I say, that we have not more statistics of the result of amputations in our Mexican army. Immediate amputation appears to have been the favored practice. "No rule was more universally acted upon by the surgeons of our army in Mexico, from the battle of Palo Alto to the treaty of peace, than the one laid down by Hennen, with as little delay as possible.†

As this was so uniform a proceeding, the opposite had but a very imperfect trial, and the statistics of success not being given by Dr. Porter in his paper, there are no means of comparing with the results in other places. We hope that some gentleman of the army will devote himself to the collecting of facts on this subject while they are still so accessible.

We are informed by Dr. Richard McSherry, of the U. S. Navy,‡ that he did not see in his own practice, or in that of any other surgeon, a single case of cure after severe injury of the thigh or knee, either with or without amputation. This was in an attendance of eight months in the hospitals of the city of Mexico, after the fighting was over, and it applies to wounds fracturing the os femoris. All other wounds seemed to do as well in that city as in other

* See American Journal Med. Sc., July, 1848. Statistics, &c., of Amputations from Jan. 1, 1839, to Jan. 1, 1848.

† Medical and Surgical Notices, &c., by John B. Porter, M. D., surgeon U. S. Army, in American Journal of the Medical Sciences for July, 1852.

‡ See Amer. Jour. Med. Sc., July 1849.

climates, and he presumes that not one case in twenty was fatal after amputation of the arm.

Report of Prof. RESTELLI, *of the Sardinian Army.**

	Aggregate.	Died.	Recovered.	Prompt Amputations.	Died.	Recovered.	Delayed.	Died.	Recovered.	Total.
Hip Joint . .	I.		1	I.						1
Thigh . . .	XVIII.	10	8	XI.	4	7	VII.	6	1	18
Leg . . .	IV.	1	2				I.	1		4
Shoulder Joint .	III.	1	2	I.		1	II.	1	1	3
Arm . . .	XVII.	6	11	X.	1	9	VII.	5	2	17
Fore arm . .	III.	1	2				III.	1	2	3
		19	26		5	17		14	6	46

The conclusion drawn from the above, by Prof. Restelli is, that prompt amputations are more felicitous in their results, than delayed.

In the African campaigns of the French in 1837, '38, and '39, according to the report of Dr. Guyon, of sixty-three amputations of all the limbs, including six at the shoulder-joint, seventeen patients died and forty-six recovered, and the results were about the same in prompt and in tardy operations. The report is, however, very unsatisfactory, from the want of details in regard to precise time, and to deaths in relation to the places of amputation. For, by putting into one sum all the deaths, it confounds things widely separated in other respects,† and leaves us without guide, at least so far as the objects of the present observations are concerned.

The report of M. Malgaigne in regard to the results of amputation in the Paris hospitals for traumatic lesions, from 1836 to 1846, is a remarkable document.‡ For example in

* See British and Foreign Med. Chirug. Review. Oct., 1850.

† See Brit. and For. Medical Review, vol. xii. 1841. From Gazette Medicale.

‡ See Amer. Journ. Med. Sc. New Series, Oct., 1848, p. 468. From Med. Times.

Thigh,	44 amputations.	34 deaths,	over 3 in 4
Leg,	67 "	42 "	nearly 2 in 3
Foot,	8 "	5 "	over 1 in 2
Shoulder,	7 "	7 "	Total fatality.
Arm,	29 "	17 "	nearly 2 in 3
Fore arm,	10 "	2 "	1 in 5

The events of 1848, when a large number of wounded insurgents were admitted into the St. Louis Hospital, appear to have left M. Malgaigne and his colleague, M. Gosselin, in the same discouragement on the subject of amputations being performed at all; and it seems that he has reached the conclusion that the opinion of military surgeons on the advantage of primary amputations, did not rest upon a very solid basis, and that in the attempt to preserve the limbs of the wounded, the surgeon did not place them in greater hazard than in amputation. It thus happens that after half a century or more of established opinion on this great point, it is now in a state of vacillation, and may possibly return to where Bilguer left it in 1762. If there be any thing intermediate to these two extremes, in its application to the present state of civil surgery in regard to railroad accidents, &c., it is, I repeat, to leave the limb, when it is hopelessly injured, without any other resection, than that of cutting off the dangling part, squaring with a saw the end of the bone, and trusting the rest to nature. In our present limited experience on this subject, I can not say that the proceeding is absolutely recommended; but there are arguments enough to invite a fair trial, and especially in compound fractures of the thigh and of the leg, where danger is so imminent, either in amputating or in trusting to nature entirely.

In conclusion, we would recommend that in the tabular form of hospital reports on the subject of amputation, the time should be regularly marked, whether it be under or above four days. Four days is probably the extremity of time for primary or prompt amputation; after that time nothing should be done for fourteen or twenty days more. Then the time for an amputation ranges for the remainder of the disease. Also, no sound reasoning can be founded upon the aggregation into one sum of all amputations, inasmuch as they vary so much in fatality, de-

pending upon the limb. The thigh, the shoulder and the leg, being the most fatal, should each have its respective consideration. The European reports that I have seen are very defective in these respects, and many of them, which would otherwise have been of value to the American reader, are, for the want of such information, passed over on the present occasion. It would be a great acquisition to the profession generally, if some one there near the seat of information, would go to work and reconstruct all of their statistical tables upon a more exact plan. To say that a patient died after amputation, is to say only one half, there may have been circumstances entirely independent of the original injury and of the amputation which led to death. These circumstances may have been of so serious a character as to destroy, of themselves, the patient; as for example—internal injuries besides external; or internal fatal diseases so far advanced that nothing could cure them, as tubercles of the lungs, brought on by caries of bones or diseases of joints. The *post hoc* is always a different consideration from the *propter hoc*, and in no one affair more than in amputations as a class of surgical affections. Our own general conclusion from what we have seen and learned would be, that amputations in the length of the bones of the upper extremity, anywhere below the shoulder joint, may be performed indiscriminately, either at once or subsequently. Perforations by balls through the elbow and wrist, in their ulterior consequences, involve great hazard to the life of the patient; but some patients recover. It is, perhaps, therefore, better to delay amputation, as there is no immediate danger for the most part. Compound fracture of the thigh is imminently dangerous, either with or without regular amputation. An intermediate plan has therefore been suggested, which, for similar reasons, may be applicable to the leg also, to-wit: the excision of the limb through the ray of attachment, and the simple squaring off of the ragged end of the bone.

Mortality of Philadelphia for October, November, and December, 1852, arranged from the Record kept at the Health Office. By WILSON JEWELL, M. D.

The returns of deaths made to the Health Office, for the fourth quarter of the year 1852, embrace a period of ninety-one days, or thirteen weeks, beginning with the 3d of October and ending with January 1st, 1853.

The number of deaths from all causes, reported during this period, have been 1158 of children under twenty years of age, and 1930 adults; in all, 2088. This shows a falling off of 635, or 23¼ per cent. of the mean proportion of deaths for the three previous quarters of the year.

By deducting the Still-Born, the deaths from External Causes, Debility and Old Age, there are left 1759 deaths from actual disease.

The deaths among females were 922; males 1166; showing an excess of 244 of the latter sex.

During the quarter, estimating the population at 409,000, there has been about 1 death to every 196 inhabitants, equal to 23 deaths per day.

Of the whole number of deaths recorded, 930, nearly 47 per cent. were under five years of age; and 129, or 6 per cent. were over seventy years of age.

The deaths from Fevers were 282; exceeding those in the 1st and 2d quarter, and twice as many as those recorded for the 3d quarter of the year. Three fifths of the deaths from Fevers, or 166, were from Scarlatina.

Consumption of the Lungs constitute a majority of all the deaths from diseases of the Organs of Respiration; 271 out of 466, ascribed to these organs, are charged directly to Consumption; whereas, if we include those from "Abscess, Hemorrhage, and Gangrene of the Lungs," with "Disease of Lungs" and "Hectic Fever," we shall still further swell the deaths from this destroying malady.

Those diseases from which the greatest number of deaths have occurred during the quarter, are, Consumption of the Lungs, 271; Scarlet Fever, 166; Convulsions, 88; Inflammation of the Lungs, 86; Croup, 71; Dysentery, 55; Marasmus, 55; Typhus Fever, 53; amounting in all to 845, and constituting very

nearly the half of all the deaths recorded from actual disease. Of these, 388 or 45 per ct. were in children under 10 years of age.

TABLE No. I.

Deaths for the Fourth Quarter of 1852, *classified.*

	October.	November.	December.	MALE.			FEMALE.			Total.
				O.	N.	D.	O.	N.	D.	
1. *Endemic and Contagious Diseases.* Zymotic or Epidemic	148	163	195	84	90	97	64	73	98	506
2. *Uncertain or general seat.* Sporadic diseases	70	103	126	37	60	70	33	43	56	299
3. The Nervous System	94	87	133	59	54	85	35	33	48	314
4. Organs of Respiration	122	157	187	65	88	92	57	69	95	466
5. " Circulation	17	16	11	9	7	6	8	9	5	44
6. The Digestive Organs	36	43	49	23	22	26	13	21	23	128
7. The Urinary Organs	2	3	1	2	3	1				6
8. The Organs of Generation	1	3	5	1				3	5	9
9. " Locomotion	3	3	5	2	1	2	1	2	3	11
10. The Integumentary System	1	2	1	1	1	1		1		4
11. Old Age	9	8	15	4	5	1	5	3	14	32
12. External Causes	22	23	25	16	13	19	6	10	6	70
Still Born	33	41	56	20	25	35	13	16	21	130
Unknown	22	25	22	11	17	11	11	8	11	69
	580	677	831	334	386	446	246	291	385	2088

TABLE No. II.

1. *Endemic and Contagious Diseases.—Zymotic or Epidemic.*

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Aphthæ	1	1	2															2
Cholera Infantum	5	4	4	2	3													9
" Morbus	16	8					2		8	5	3	2	2	1	1			24
Croup	34	37	12	15	36	7	1											71
Diarrhœa	11	17	8	7	2				3			2	4		2			28
Dysentery	36	19	5	11	11	4		3	6	5	5	2	2	1				55
Erysipelas	6	4	4	1						3		1	1					10
Fever	2	5	1					2		1	1	1				1		7
" Bilious	4				1				3									4
" Congestive	2	2			3								1					4
" Intermittent	1					1												1
" Remittent	2	3	1		1		1			1	1							5
" Scarlet	90	76	16	21	76	19	2	1	1									166
" Synocha	1								1									1
" Typhus	22	31			2	1	1	5	17	6	6	10	5					53
" Typhoid	26	15	1	1	4		1	5	13	8	5	2		1				41
Hooping Cough	2	3	3		2													5
Influenza	1	2										1	1	1				3
Measles	2	1	2		1													3
Small Pox	7	6	4	2	5	1			1									13
Syphilis		1								1								1
	271	235	6	60	147	63	8	16	53	30	21	21	16	4	3	1		506

2. *Uncertain or General Seat.—Sporadic Diseases.*

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Abscess Psoas		1								1								1
Angina		3	1		1			1										3
Cachexia	1	2	1							1	1							3
Cancer	1	4								1	1	1	1	1				5
" Breast		1													1			1
" Throat	1								1									1
Cyanosis	4	2	4	1	1													6
Debility	66	31	38	1	1				2	5	11	6	6	16	9	2		97
Disease of Mesen. Glands		1	1															1
Disease of Throat	1												1					1
Dropsy	23	14		3	5	1	1	2	2	7	6	2	6	2				37
Fungus Hematodes	1											1						1
Gangrene	1	3			1							1		1	1			4
Gout in Stomach	1												1					1
Hemorrhage	3	5	2						2	2	1			1				8
Inanition	8	6	11							1			1		1			14
Inflammation	1	4		2						1		1		1				5
" of Neck	1		1															1
Malformation	5	1	5				1											6
Marasmus	29	26	27	12	8	1	2	1	1	1				1	1			55
Mortification		1												1				1
Ptyalism		1								1								1
Scirrhus		2									1			1				2
Scrofula	17	9	3	3	4	2	7	3			2	1	1					26
Tabes Mesenterica	3	9	3	1	5		1		1	1								12
Tumours		2									1		1					2
" of Neck		1	1															1
Ulceration of Throat		3	1	1	1													3
	167	132	99	24	27	4	12	7	9	22	24	13	18	25	13	2		299

3. *Of the Nervous System.*

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Abscess of Brain	1							1										1
Apoplexy	16	8				1			1	2	4	4	7	5				24
Asthma Thymic	1		1															1
Cerebral Disease	1											1						1
" Fever	1			1														1
Compression of Brain	1	1							1		1							2
Concussion "	1									1								1
Congestion "	12	7	5	1	2	2			2	2			4	1				19
Convulsions	57	31	51	16	15	2	1	1		1	1							88
Cramp	1			1														1
Disease of Brain	14	9	9	2	3	1	3		1	3				1				23
Dropsy "	19	13	13	8	6	3	1		1									32
Effusion "	10	10	2	2	6	1		1		2	3	3						20
Epilepsy	3	3					1		2		1	1		1				6
Hemorrhage from Ear		1	1															1
Inflammation of Brain	27	18	9	5	15	3	1	3	5	3	1							45
Injury of Brain	1														1			1
Mania		2							1	1								2
" a potu	12	3								6	4	4		1				15
Neuralgia	1												1					1
Palsy	9	8	1			1			2		1	2	4	4	2			17
Softening of Brain	7	1			1				1	2	3	1						8
Tetanus	2	1				1			1			1						3
Trismus	1		1															1
	981	116	93	36	18	15	7	6	18	23	19	17	16	13	3			314

4. Organs of Respiration.

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Abscess of Lungs	3	1						2		1		1						4
Asthma	1	1		1										1				2
Congestion of Lungs	4	9	6		1	1	1	1	1				2					13
Consumption "	134	137	5	7	3	6	4	19	80	57	39	33	11	7				271
" Laryngeal		1										1						1
Disease of Lungs	4	1	1			1		1	1		1							5
" Chest	3	1	1	1	1							1						4
Dropsy of Chest	3	2		2						1	1		1					5
Effusion "	2	1		1		1								1				3
" Lungs	1	1										1			1			2
Fever, Hectic	1				1													1
Gangrene of Lungs	1												1					1
Hemorrhage "	4	3							3	1	2	1						7
Inflammation of Bronchiæ	23	18	24	3	4	3	1		2	2			1	1				41
" Chest	4		1	1	2													4
" Larynx	3	4	1		4	1			1									7
" Lungs	50	36	17	12	10	2	2	3	16	3	8	5	5	1	2			86
" Pleura		2					1			1								2
" Throat	1	1		1		1												2
Tuberculosis	3	2	1	1					3									5
	245	122	57	30	26	16	9	26	107	66	51	13	21	11	3			466

5. Organs of Circulation.

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Anæmia	1	1	1							1								2
Angina Pectoris		1												1				1
Aneurism of Aorta	2										2							2
Disease of Heart	15	13	3		1	3		2	3	1	5	4	4	2				28
Dropsy "	1								1									1
Effusion "	1													1				1
Enlargement of Heart		2						1		1								2
Inflammation "	1	4		1			1		1	1		1						5
Malformation "	1	1	1	1														2
	22	22	5	2	1	3	1	3	5	4	7	5	4	4				44

6. *Digestive Organs.*

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Abdominal Dropsy	7	3							1		2	3	2	2				10
Abscess of Liver	2	1				1			1		1							3
" of Stomach	1											1						1
Cancer of "	1	1								1	1							2
Cancrum Oris	3	4	2		5													7
Cirrhosis of Liver		1							1									1
Disease of Bowels	1	3	3											1				4
" Liver	3	3						1	1	2	1			1				6
" Stomach		2								1				1				2
Dyspepsia	1											1						1
Hemorrhage of Bowels	2	1					1		2									3
" Stomach	1	2	1							1			1					3
Hernia, strangulated		1										1						1
Inflam. of Liver	3	3							1	1	1	1	2					6
" Peritoneum	7	6	1		1				5	4			1		1			13
" Pharynx	1		1															1
" Stomach		2								1			1					2
Inflam. Stomach & Bowels	32	16	8	2	5	5	1	2	4	7	6	5	1	2				48
Jaundice	2	2	2							1			1					4
Obstruction of Bowels	1	1								1		1						2
Perforation of Bowels		1									1							1
Stricture of Colon	1												1					1
Teething	1	1	1	1														2
Ulceration of Bowels	1	2							2				1					3
Worms		1			1													1
	71	57	19	3	12	6	2	3	18	20	13	13	11	7	1			128

7. *The Urinary Organs.*

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Disease of Kidneys	2								1	1								2
" " and Bladder	1													1				1
Inflam. of Bladder	1														1			1
" of Kidneys	1					1												1
Urinary Calculus	1												1					1
	6					1			1	1			1	1	1			6

8. *Organs of Generation.*

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Enlargemt. Prostate Gland	1									1								1
Puerperal Fever		3							2	1								3
" Inflam.		1								1								1
Hemorrhage from Uterus		1							1									1
Inflammation "		1								1								1
Cancer of Uterus		1									1							1
Phlegmasia Dolens		1							1									1
	1	8							4	4	1							9

9. *Organs of Locomotion.*

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Caries	1	1									1		1					2
Hip Disease	1	1			1				1									2
Disease of Spine		1								1								1
" Leg	1							1										1
Cancer "		1								1								1
Fracture of Spine	1								1									1
Atrophy Spinal Marrow	1											1						1
Rheumatism		1												1				1
Spina Bifida		1	1															1
	5	6	1		1			1	2	2	1	1	1	1				11

10. *The Integumentary System.*

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Purpura Hemorrhagica	3	1	1	1	1				1									4

11. *Old Age.*

Old Age	10	22										3	9	12	6	2		32

12. *From External Causes.*

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Asphyxia . . .	5	5	8	2														10
Burns and Scalds . .	4	6	1	3	3	2				1								10
Casualties . . .	18	4	5		1	1			4	3	3	5						22
Drowned . . .	9	2				1	1	2	2	3	1	1						11
Intemperance . .	5	2							1	2	3	1						7
Suffocation . . .	2	3	2							1			2					5
Suicide . . .	3									1	2							3
Violence . . .	1							1										1
Exposure . . .	1									1								1
	48	22	16	5	4	4	1	3	7	12	9	7	2					70
Unknown . . .	39	30	20	4	3		1	1	4	10	6	7	6	4		3		69
Still Born . . .	80	50	130															130

TABLE NO. 3.

Deaths for the Fourth quarter, at fifteen distinct periods of life.

Under 1 year, ...	374
1 to 2	165
2 to 5	270
5 to 10	118
10 to 15	41
15 to 20	66
20 to 30	229
30 to 40	194
40 to 50	152
50 to 60	127
60 to 70	99
70 to 80	79
80 to 90	36
90 to 100	12
100 to 110	2
	1958
Still Born	130
Total,	2088

Included in the above Tables, were 193 from the Blockley Almshouse; 171 people of color, and 18 from the country; as follows:

	Almshouse.	Blacks.	Country.
October, . . .	42	48	9
November, . . .	66	58	5
December, . . .	85	65	4
Total,	193	171	18

SUMMARY FOR THE WHOLE YEAR.

The quarterly tables presented in this Journal for the year 1852, exhibit, in those marked No. 1, the number of deaths, with their causes, for each month, grouped or classified in accordance with the system approved by the American Medical Association: They also furnish the sexes in which the deaths took place.

The tables marked No. 2, show in their classified relations, not only the number of deaths, but the names of the diseases causing death, as given in the certificates returned to the Board of Health. They are arranged under fifteen distinct periods of life.

The tables, No. 3, furnish the aggregate of deaths at fifteen distinct periods of life.

There are also appended, the deaths which took place during each quarterly period, at the Blockley Almshouse; the number of deaths among the colored population, as well as the number brought from the country to be interred in the city.

The following table exhibits the deaths for the year 1852, in each sex, under the several classes of disease:

	Male.	Female.	Total.
1. *Endemic and Contagious diseases.* Zymotic or Epidemic,	1398	1387	2785
2. *Uncertain or General seat.* Sporadic diseases,	698	575	1273
4. The Nervous System,	957	712	1669
3. Organs of Respiration,	1147	1025	2172
5. " " Circulation,	114	105	219
6. Digestive Organs,	313	314	627
7. Urinary Organs,	28	4	32
8. Generative Organs,	8	104	112
9. Locomotive Organs,	26	20	46
10. Integumentary System,	9	9	18
11. Old Age,	57	135	192
12. External Causes,	240	82	322
Still Born,	293	223	516
Unknown,	149	126	275
	5437	4821	10258

In accordance with these tables, the aggregate of deaths from all causes for the year was 10,258, an excess of 1387, or

13 per cent. over those for 1851. This aggregate furnishes one death to every 39 8-10ths of a population of 409,000.

Included in the above total were 913 from the Blockley almshouse, 832 blacks and 108 from the country, in all 1853.

The highest number of deaths in any one month, occurred in January, amounting to 1037, making 33½ deaths per day. The lowest number was in October, viz. 580; equal to 18¾ deaths per day. The mean number of deaths per day, throughout the year was 28.

Of the whole number of deaths, 5049, or 49 per cent., were among children under five years of age. Of this great excess of mortality in infancy, 2800, or 27½ per cent. occurred before the termination of the first year of life. In this calculation we have included the "still-born," which amounted to 516. How many of these were premature, or how many had reached the full period of gestation, we have no means of ascertaining. This information would be valuable in order to show the risks of life encountered during the eventful period of parturition.

Of the deaths from all causes, exclusive of still-born, 590, or 6 per cent., were beyond 70 years of age. Of these, 188 were over 80; 38 were over 90, and 7 were between 100 and 110 years of age.

The most prevalent diseases in the community, and the number of deaths therefrom during the year, have been as follows: Consumption of the Lungs, 1204; Dysentery, 558; Convulsions, 499; Inflammation of the Lungs, 444; Scarlet Fever, 433; Small Pox, 426; Marasmus, 354; Debility, 345; Cholera Infantum, 329; Inflammation of the Brain, 258; Dropsy of the Brain, 247; Inflammation of the Bronchiæ, 208; Croup, 208. In all, 5513, constituting a majority of the whole number of deaths recorded.

In the aggregate of deaths we find the preponderance on the side of the males. While those among females amounted to 4821, the male deaths were 5437, an excess of 616, or about 13 per cent., over the females.

Among the "Still-Born" the excess was 30 per cent. on the side of the males. From "External Causes," there were three

males to one female. While among the deaths from "Old Age" there were two females to one male.

The diseases under the head of Zymotic, have contributed a very large proportion towards making up the deaths for the year, viz. 2785, or 28½ per cent. of the whole number. The Sporadic diseases caused about 13 per cent. The diseases of the Nervous System have contributed 1669, or 17 per cent. Those of the Organs of Respiration 2172, or nearly 22 per ct. These calculations do not include the "Still-Born, 516."

The deaths, specified in the record as Consumption of the Lungs, number 1204: this gives one out of every 8½ deaths during the year, or nearly 12 per cent. There is an increase of mortality from this disease over the year 1851, of 35 per cent. The deaths from Consumption for 1852, to population, is as one to 90½.

The following table presents a comparison between the diseases which have been most fatal, hence most prevalent, for five consecutive years:

	1848	1849	1850	1851	1852
Cholera Infantum,	454	582	505	397	329
Consumption of the Lungs,	965	939	907	881	1204
Congestion of the Brain,	85	91	97	130	120
Convulsions,	401	415	444	479	499
Croup,	177	130	143	180	208
Debility,	145	200	201	260	345
Diarrhœa,	122	225	208	157	156
Dropsy of the Brain,	220	237	283	245	247
Dysentery,	315	578	421	401	558
Scarlet Fever,	172	242	439	400	433
Inflammation of the Brain,	186	198	218	202	258
" " Bronchiæ,	172	169	191	175	208
" " Lungs,	265	273	352	352	444
Marasmus,	237	264	217	255	354
Old Age,	188	226	185	186	192
Small Pox,	100	152	40	216	426

CLINICAL REPORTS.

Pennsylvania College, Ninth below Locust street. Service of Professor GILBERT.

Reported by W. H. GOBRECHT, M. D.

Dec. 22*d.* George W. S——, (Case L.) *Varus of both feet*, exhibited, apparatus removed, and re-applied. The feet show a much less decided tendency to their abnormal position than at the last dressing.

Anna J. S——, (Case XLIX, *Operation for effects of Burn*,) reported progressing as favorably as possible under the unfavorable influenza complication.

Dec. 29*th.* John P——, (Case XXVII,) *Tenotomy.*—The arm and hand are found nearly in a straight line, without any tendency to a return to the abnormal position. The splint is ordered to be entirely dispensed with, and the use of the fingers and wrist restored by passive motion. The wrist is found much enlarged in its antero-posterior diameter. This results from a change in the form of the carpal bones, the effect of the anterior muscular contraction, which withdrew them from their normal location, subjecting them to such alteration. As a consequence of this alteration in the configuration of the carpus, when restored to its proper situation, some deformity must exist, but which in such a youthful subject disappears by the progress of growth.

The case should be occasionally looked to, and if any tendency to the old deformity re-appears, the splint should be again resorted to.

CASE LIII. *Chronic Pharyngitis.*—Michael K——, aged 39. Marble polisher. (Was a soldier in the Mexican War.)

This patient complains of pain in the throat, which is dry, whilst he is quite hoarse. An elongation of the uvula which existed was snipped off by his previous attendant. Whilst in Mexico he had obstinate Diarrhœa, and has had Dyspepsia for a long time. On examination of the throat, chronic inflammation of the mucous membrane of the pharynx is found to exist, which inflammation has extended into the larynx.

Prof. Gilbert states that he has seen and treated very many cases of this kind, occurring in clergymen and theological students, and has always found that there is accompanying gastric disturbance; he therefore administers remedies addressed to the stomach, as, one-fourth of a grain of Nitrate of Silver, thrice daily for several months. This treatment is then replaced by Sulphate of Copper, Sulphate of Zinc, and Iodide of Potassium, successively, in alterant doses, after which the Nitrate of Silver is again resorted to. The patient is ordered:

℞. Argenti nitrat. gr. x.
Mic. panis q. s.
M. ft. in pil. No. XL.
S. One thrice daily.

When the stomach has its proper tone restored, the throat will return to its normal state.

The diet should be farinaceous, with milk, and is to be taken in moderate quantities at regular periods.

Moderate exercise should be resorted to in good weather.

Case LIV. *Contusion of Right Shoulder.*—Justus S——, aged one year. This patient was sent to us under the belief that the injury was a luxation of the humerus, but examination, notwithstanding considerable swelling exists, proves that the bones occupy their proper relative positions; whilst the inability to elevate the arm, results from severe contusion of the deltoid, which is painful on pressure. The following liniment was ordered to be rubbed twice daily upon the contused parts:

℞. Linamenti Ammoniæ f℥ij.
Tinct. Opii f℥ss.

and a bandage applied to restrain motion of the arm.

Jan. 5th, 1853. The tumefaction has subsided and luxation is proved not to have existed.

Case LV. *Varicose Ulcer.*—Michael N——, aged 48. This patient has an ulcer on the anterior part of right leg, above the ankle, of long standing, resulting from varicose veins in that limb.

In any case, so long as this condition of the veins, which are both enlarged in calibre and thickened in their coats, exists, no cure of the ulcer can be effected; and should we find, as we most frequently

do, that the elastic laced stocking fails to support the vascular walls, or to prevent their rupture, we must employ some method to prevent the return of blood through the superficial veins, and change its direction into a deeper channel. To do this, *caustic* has been applied to the principal venous trunk; the *ligature* has also been employed, but the best plan is to pass a pin beneath the principal vein, and then to apply a figure of eight ligature about its projecting extremities; the pressure thus produced on the sides of the tube shuts off entirely all communication of the lower with its upper portion, and the pin, if allowed to remain, will cut itself out, thus completely dividing the vessel; but the establishment of inflammation usually effects obliteration of veins, and this is sufficient. A needle was then passed beneath the internal Saphenous vein of the right side, just above the knee, by pinching up the skin and superficial fascia containing it, and introducing the instrument from before, backward, close to the posterior wall of the vessel. The ligature was then applied. Dressed with an adhesive strip.

5th. The needle still remains, the veins have much diminished in calibre, the ulcer is moist with pus, and the edges are cicatrizing.

8th. Needle removed to day, and the following application ordered for the ulcer:

℞. Cretæ. ppt. ʒij.
Cerat. simp. ℥i.
M. ft. in ung.
S. As directed.

The ulcer is still improving, granulations are abundant, and cicatrization progressing. The varicose veins have disappeared entirely. In these cases the blood returns through the deep seated veins.

Case LVI. *Result of lacerated wounds, with comminution of bones of foot.*—Jacob B——, aged 23, about five years since, had his left foot caught and crushed between two canal boats; there was bad compound fracture of the metatarsus, and extensive laceration of the soft parts. With great care, however, the foot was saved, but there has been a loss of much of the soft tissues in the sole, whilst the breadth of the foot is diminished. Since the period

of primary cure, some exfoliations of the metatarsal bones have occurred—two or three orifices now existing in the outer part of the plantar aspect of the foot, communicating with the metatarsus, which lies immediately beneath the integument. The foot, however, whose articulation with the leg is perfect, will doubtless become much more useful than any artificial limb could be, for by adapting to the sole an elastic air or other cushion, pressure upon the bones will be obviated, and thus repeated ulcerations prevented. Prof. Gilbert stated that this patient was treated originally by his friend Dr. Case, of Liverpool, Pa., whose efforts to save the foot have been eminently successful.

Jan. 5th, 1853. CASE LVII. *Paralysis of right side of face.* —This patient, a colored man, states that he had Mumps, and a resulting abscess was lanced, since which time his right eye has remained constantly open, and none of the muscles of that side of the face, which is perfectly flat, move at all, neither is there much feeling about it. The *portio dura*, (the nerve of motion of the face,) has evidently been divided in this operation, and hence the paralysis. Whilst no treatment will be available, no danger is to be apprehended from this condition of things.

CASE LVIII. *Tumor of left Cheek.* Eliza D——, aged 20. This enlargement in the substance of the left cheek was first noticed about four weeks ago, since which time it has gradually increased; it is quite moveable, having contracted no adhesions with the surrounding structures. On examining the teeth, two in the lower jaw, immediately opposite the tumor, were found decayed; believing that this tumor arose from inflammation at the roots of these teeth, resulting in the formation of pus, and an attempt at the establishment of a *sinus*, for its escape from the alveoli, the decayed fangs were extracted, and Tincture of Iodine painted over the surface of the enlargement. The patient is now brought forward, to show the diminution of the external swelling, both from the establishment of a proper outlet within, for the pus formed, and the absorption of the effused lymph as a result of the Iodine application. If the progress of this case had not been thus arrested, an opening for the discharge of the abscess would have been formed in the lower border of the cheek, and

this would have become fistulous, with continued discharge of pus from the diseased fangs and alveoli.

Contusion of Hip. Salone T——, (Case XLVIII.) In this case the bandages have been entirely removed, all tenderness of the joint has subsided, and the patient walks perfectly well, devoid of any lameness. The most important element in the treatment of all articular affections, viz., rest, in this case, by means of the immoveable dressing, has been the efficient means by which this successful result has been attained.

Case LIX. *Tinnitus Aurium.* James R——, aged 35, states that about three years since he first noticed a constant noise in the left ear like the blowing off of steam, which has existed ever since, with more or less intensity. It was supposed to arise from a severe cold, which he had contracted at that time. Prof. Gilbert mentions an instance of the same symptom following concussion of the brain, in a case treated by him recently. It is probable that in this instance inflammation of the external ear has extended itself through the internal ear to the membranes at the base of the brain.

Creasote, as a counter-irritant, was painted freely over the mastoid process of the temporal bone, and Calomel, 10 grains, prescribed, to be followed in two hours by Magnesia, a drachm.

Jan. 8th. Not much relieved. (This patient works in a factory as a weaver, where there is a constantly aggravating noise around him.) Creasote re-applied, and another purge prescribed.

Case LX.—*Dislocation of right thumb.* William A——, aged 26, presents himself with a dislocation of the right thumb into the palm at the metacarpo-phalangeal articulation, occurring eighteen days since, during which time two unsuccessful attempts have, been made for its reduction. The patient being seated, the clove hitch was applied to the first phalanx of the thumb, for extension, whilst the arm, semi-flexed, was grasped above the elbow, for counter-extension; the external lateral ligament of the affected joint was then divided by Hypodermatomy, and the proper forces steadily and perseveringly applied by means of the hands of assistants, without much effect. The *twisted* rope was then attached

to the clove-hitch, whilst the arm was secured by a folded sheet to a fixed point, and the forces re-applied with greater intensity, when, but little benefit following, the internal lateral ligament was divided, and then the thumb was brought very nearly, but not altogether, into its proper position.

At this time it was deemed advisable to make no further efforts at the reduction. A splint was applied and the cold water dressing ordered.

CASE LXI.—*Convergent Strabismus* of right eye, in Elizabeth B——, aged 20, was operated upon, with perfect relief resulting. The deformity in this case was unusually great. Section of the tendon of the internal rectus, with the intermuscular fascia above and below it, was sufficient without interfering with any of the adjoining tendons.

The success of this operation depends upon the complete division of the tendon. Sometimes the blunt hook slips between the longitudinal fibres, and these, when undivided, if ever so small, will prevent the eye from returning to its normal position. There is very little after treatment necessary. The eye need not be covered; if painful apply cold water.

CASE LXII.—*Congenital, oblique inguinal Hernia*, occurring in Thomas H——, aged 8 years, was exhibited, and Hull's truss applied. In these cases there is no proper hernial sac, but the intestines pass down into the cavity of the tunica vaginalis testis which is continuous with the general peritoneal cavity, the continued existence of the hernia having prevented the early obliteration of the peritoneal canal connecting them.

Jan. 8th. Abscess beneath fascia lata of left thigh, (Case XLV.) This patient, Ellen C——, has walked imperfectly for several weeks past, complaining, however, of no pain. A superficial ulcer has appeared near the opening of the abscess, and one or two elsewhere, evidently strumous in character. She is ordered good and nutritious diet, fresh air, daily ablution with warm water and friction with a coarse towel; also,

℞. Liq. Iodinii comp. (Lugol's sol.)
S. gtt. vj. thrice daily.

CASE LXIII.—*Congenital varus, right foot,* in Robert C——. aged 1 month, to be operated for on 12th inst.

The subject of the Etiology of Varus is interesting, as it is involved in doubt. Under it we have to consider the question of *Hereditary transmission*, as well as *the influence of the mother's mind during gestation.* Upon these points many confirmatory facts are adduced, which have undoubted weight, although authors generally stand aloof from a participation in their consideration. But however we may view this matter in the present case, it is stated that the child's grandmother on the mother's side had club-foot, and that the father, (Case LXVII.) often during the last three years, had violent cramps in the right leg, which the mother (being pregnant) held and rubbed, frequently much frightened by their great violence.

Such facts are being made known to us constantly, and if they have no participation in the production of club foot they certainly form with it very singular coincidences.

12th. The operation for subcutaneous section of the tendo Achillis was performed in the usual manner, and Prof. Gilbert's apparatus applied.

15th. The puncture in the integument is found closed, the tendon elongated, and the foot very nearly in its normal position.

CASE LXIV.—*Ptosis.* Robert R——, aged 37. This patient has Ptosis, or falling, in his case, of *both* upper eyelids, the effect of a blow which occurred seven years ago, by the falling of a piece of timber, weighing about a hundred pounds, from a height of some eight feet, striking the upper and back part of the head in the median line, cutting the scalp and felling him, upon which the patient arose at once, but immediately fell again, being insensible for some time thereafter. He states that no especial treatment was resorted too, so that concussion, most probably, existed only in the first and second stages, the third or Inflammatory stage not supervening.

In about a year from this accident the Ptosis appeared. On examining the point of injury in the cranium, we discover a slight depression. It is possible that this affection may be the remote result of *contre coup*, or that there may have been a portion of the inner table of the skull detached, (since the patient often

perceived a sensation as of a loose foreign body beneath the injured point,) effecting this change by producing remotely a paralysis of the nerve supplying the levator palpebræ.

In some instances, Ptosis results from disorder of the digestive functions, and is removed by abstracting the cause. This condition is not found here. In this patient the relief of the affection would be obtained by removing an elliptical portion of the integument of the upper lid, and then bringing the lips of the wound together by the twisted suture; in this manner the occipito-frontalis would be made to act more directly upon the lid and perform the function of the paralyzed muscle, which indeed it does to a great extent at the present time. But as the ptosis, in this instance is so slight, the patient seeing quite well by throwing the head a little backward, the operation is not recommended unless it should become worse.

Jan. 12th. CASE LXV. *Enlarged Lymphatic Glands.*—Amanda M——, aged 25, of scrofulous diathesis, is shown to have enlarged lymphatic glands on the left side of the neck. For which the external application and internal administration of Iodine is directed.

19th. Improving.

CASE LXVI.—*Sinus in Left Cheek.*—Delia M——, aged 20. This patient has a sinus in the left cheek, whose external opening, through a fungus excrescence, is found at the middle of the left side of the base of the lower jaw, the result of an abscess which formed here a short time since. On examination of the mouth, a decayed fang of the first molar is found in the lower jaw, which has doubtless been the origin of the succeeding affection. Inflammation has been set up at its apex, and suppuration following, the pus has forced a passage through the alveoli, formed an abscess in the cheek, and discharged externally. As long, therefore, as the fang plugs up the socket, this fistula will remain, whilst adhesions will be contracted between the now consolidated integument and the bone, demanding at length a more extensive operation than mere extraction of the offending fang, which is always necessary, viz: extirpation of the fistulous tract.

The fang was then removed, and a poultice ordered to the external orifice of the sinus.

19th. Inflammation in the sinus is much diminished, and the case is progressing favorably.

Jan. 15th. CASE LXVII. *Spinal Irritation.*—Robert C——, aged 32. Carpet weaver. Some three years and a half since, this patient was first troubled with convulsive motions of his right leg, which gradually increased in intensity until about six months after their commencement, when he had cramps in both legs, which finally became general, almost amounting to a convulsion. Such attacks as these have recurred at uncertain intervals, of two, four or six weeks, up to this time. Œdema of the right leg exists to some extent: the appetite is good, and the action of the bowels normal. The patient is slowly emaciating, although the spasmodic attacks are not increased in frequency.

Pressure over the spine in the lumbar region produces decided pain in the right knee and thigh, from which we infer that the convulsive movements are dependent upon chronic inflammation of the meninges of the spinal cord, the nerves being unduly compressed at their exit from the canal. From the long standing of this case the best counter-irritant will be a Seton placed in the lumbar region. This was accordingly introduced by plunging a common straight bistoury through the base of a fold of integument raised up on the right side of the spinous processes, and the passage of a tape by means of an eyed probe. Iodide of Potassium, in 5 grain doses, which the patient has been using, it is thought proper to continue. Comparative rest is also desirable.

In regard to the amount of pain developed by pressure on the vertebral column in spinal irritation, it may be stated that in females the spine being more yielding than in males, the bones are made to act more readily upon the cord and its nerves, in the former than in the latter case, and pain in proportion to the flexibility of the column would result.

CASE LXVIII. *Medullary Fungus.*—James McC——, aged 60. A scirrhous lump existed in the lower lip of this patient, noticed first as a small desquamating surface, and from this pro-

gressing to a tumor of an inconvenient size; twelve months since it was removed, and about six months after the operation the glands at the base of the jaw, on the right side and in the throat, enlarged and eventually ulcerated, presenting the unfavorable appearance now exposed. The cachectic look of the patient, his advanced age, the rapid growth of the tumors, the extended ulcerating and fungous surface, the firm base of the diseased mass attached to the bone and tissues, and the persistent pain, forbid any idea of relief by operative means. In such a malignant disease as this with which we are called to contend, palliatives are our only measures.

There is therefore prescribed as a local appliance,

R.	Acidi Arseniosi,	gr. iv.
	Pulv. Opii,	gr. xii.
	Zinci Oxidi,	ʒss.
	Cerat. Simp.	℥ii.

M. ft. in ung.

S. Apply twice daily.

Bowels to be kept open and nutritious food eaten.

This case is precisely similar to Case LI, Mr. G——, except that it is further advanced, having reached the ulcerative stage.

Case LXIX. *Strabismus.*—James C——, aged 27. Has convergent strabismus of the left eye, which is non-congenital, but has existed as long as he can remember, and is extreme in its degree. The operation was performed in the usual manner, and the tendon of the internal rectus muscle *entirely* divided; notwithstanding this, however, the parallelism of the globes was not *quite* restored. It is directed, in order to establish their proper relation, that the sound eye be closed, and the affected eye alone used for a time; thus a habit of turning it outward will be established, and the proper tone of the external rectus restored; then the eyes will, it is hoped, be found to have regained their parallelism.

No external applications made; cold water directed only, if inflammation be set up, or a tendency thereto is shewn.

Jan. 19th. Case LXX. *Cleft Palate.*—Deformities of this kind depend upon *arrest of development* during intra-uterine existence, and may arise from imperfection in the elaboration of the male semen or in the formation of the ovum, from deficiency in the structure of the maternal organs, or accidents during gestation. The body being formed of symmetrical halves, an arrest of their union in the median line, or an imperfect development of either half, and other changes, may result in a great number of congenerous deformities, as spina bifida, hare lip, and other fissures. There may be deficiency of the extremities, or adhesion of the lower limbs throughout their entire length, (as seen in a specimen in the College Museum,) there may be closure of the orifices of the rectum, vagina, etc. These affections, as before stated, are the result of a want of the proper *development* which should occur during *intra-uterine* life; *growth* being the *extra-uterine* condition in life.

This patient, Jacob M——, aged 11, has a cleft in the soft palate principally; the posterior part of the bony arch only being affected; the uvula is divided in the mesial line, the lateral halves being perfect.

If this patient was old enough to co-operate with us in the treatment, we might pare the edges (of the lateral halves of the uvula) which present to the median line, and bring them in apposition by ligatures; but so much is dependent on the quietude of the patient, and his just conception of the importance of the operation and its results, as a guide to his conduct, that we shall not recommend any decided measure until he has attained a greater age.

Case LXXI. *Eczema.*—John McI——, aged 10. This disease made its appearance some four years since, the eruption now existing principally about the nates and posterior part of the thighs. No previous treatment has had much control over it.

Ordered,

℞. Liq. Arsenici et Hydrargyri Iodidi.
S. Three drops, thrice daily.

And ℞. Ung. Picis Liquidæ.
S. Apply to eruption daily.

Case LXXII. *Double Cataract.* Margaret G——, aged 59.

Patient states that about nine years since, the sight in the right eye failed somewhat, and double vision followed. Strong applications were made to the part; violent inflammation followed, and vision failed still further. This was lost first in the upper, and then in the outer part of the eye, and objects at first seen double were now tripled. Sight was then lost, in this, and soon the left eye became similarly affected. She can now distinguish the light of the sun and that of candles.

The left eye is chosen for operation.

From the history of this case it would seem that an inflammatory condition of the eye is liable to be set up by any irritating cause, more readily than is usual. The color of the cataract is dark grey, so that we shall probably find it fluid or soft, and this must be discharged into the anterior chamber.

The eye is of good form, however, and we shall use a very *fine* straight needle; the patient has also been purged gently as a preparative; by these means we hope to obviate any inflammatory accession.

Sclerotonyxis was then performed with a fine straight needle, nearly in the axis of the ball on the outside, and one and a half lines posterior to the corneal margin. Rather more external hæmorrhage than is usual followed the puncture; the cataract was found soft, and was broken up and dispersed with but little difficulty.

Prof. Gilbert states, that in persons of this age, we expect to succeed in four out of five cases, whilst in young subjects we succeed in nineteen out of twenty. A favorable result has followed the operation, in his hands, in several cases over the 75th year.

BIBLIOGRAPHICAL NOTICES.

Report of the Select Committee of the House of Representatives to whom was referred the memorial of Dr. Wm. T. G. Morton, *asking remuneration from Congress for the discovery of the anæsthetic or pain-subduing properties of Sulphuric Ether.* Dr. Wm. H. Bissell, of Illinois, Chairman.

This is the report agreed upon by the committee above named, and which is now published, in advance of its presentation, with the attest of the Clerk of the House, dated June 28, 1852. It fully recognizes and endorses the claim of Dr. Morton, and is accompanied by an act granting to him the sum of $100,000, on condition that he surrenders all right and title to the patent heretofore issued to him. The report is able and learned, covering the whole field of controversy between Dr. Morton on the one hand, and Drs. Jackson and Wells on the other. In its general conclusions we are disposed to coincide. It fully makes out the case of Dr. M. as against his rival claimants, placing Dr. Jackson in the unenviable position of claiming the credit of an improvement which he certainly did not make, and in the responsibility of which he seemed by no means anxious to be involved at the time. We cannot add, however, that it so fully makes out Dr. M.'s case in his own behalf. We are willing to give him all the credit he really deserves, and we have no objection that Congress shall allow him the sum named. But we cannot agree that Dr. M. has made altogether such a discovery as the Committee report, or that to him *alone* is due the credit of introducing anæsthesia in surgery.

It does not appear, even by the showing of this report, that Dr. M. did in reality *discover* the pain-subduing power of ether, as stated in his memorial. That was pretty well known before, as the facts cited by the committee sufficiently prove. Dr. M. confesses that it was from Dr. Jackson that he learned the local anæsthetic effect of ether as applied to a painful tooth,—an observation by no means original with Dr. J., although he seems to have thought so. Many similar applications of it had been suggested. Among others that seem to be overlooked, Mr. Hugh

Neill of Liverpool had previously recommended the injection of vapor of ether into the Eustachian tube in painful affections of the internal ear, with a distinct recognition of its local anodyne power. Neither was the idea of producing general anæsthesia by inhalation of narcotic vapor original with Dr. M. He had witnessed the unsuccessful attempts of his former partner, Dr. Horace Wells, to produce it by nitrous oxide gas. The transition to sulphuric ether was obvious. The merest tyro in chemistry has, for these many years, known how similar are the effects of vapor of ether and nitrous oxide when inhaled. Both had been taken thousands of times to the extent of intoxication, and the result seen to be almost identical. Thus it appears that Dr. Marcy, of Hartford, suggested to Dr. Wells in 1844, to substitute the ether in his experiments, which he did in one instance with entire success. Dr. Morton has given a long account of the steps by which he arrived at his conclusions, showing that his difficulty arose in the outset from his ignorance of facts well known to others at the time. His merit consists simply in his having first had the courage and directness to settle conclusively by a practical test what with others had been only a suggestion or proposition. For this he certainly deserves praise, and we are not disposed to withhold it from him. What he really did discover was not the anæsthetic power of ether, but the fact that it may be given with safety to the extent requisite for annulling pain in surgical operations. Were he to claim no more than this, we imagine that his right would be generally admitted at once; and the improvement is such, that we think even an ambitious man, as Dr. M. expressly states himself to be, might be satisfied with the credit arising from it.

Much of Dr. M.'s difficulty seems also to have arisen from the spirit in which he prosecuted his inquiries. Had he consulted any competent chemist frankly, he could have learned all that he needed about sulphuric ether at one interview. Had he sought the advice of any skilful physician, he could have been enlightened readily with regard to the probable effects of his proposed experiment, and the means of guarding against any ill consequences. But, instead of this, we find him, by his own statement, cautiously propounding guarded questions concerning ether to scientific persons—stealthily picking up odd scraps of information—

trembling lest others might divine his object in catecizing them—sending his "four-ounce-phial" first to one and then to another apothecary—afraid to take the means necessary to secure him good ether, and altogether displaying an extraordinary degree of suspicion as to the honesty and honor of his neighbors. No sooner had the surgeons of Boston used the mysterious fluid which he brought with him to the Hospital, and demonstrated that it could be employed with safety, than he commenced steps for procuring a patent. The fluid itself was called Letheon, and the style of its announcement was such as to lead the profession to believe that Dr. M. had discovered *a new substance* with these extraordinary powers. Let any one recur to the journals of the day, and he cannot resist the conviction that such impression was produced *intentionally*. Now, in this business, as well as in that of the patent, there was a degree of quackery which has always rendered us indifferent as to whether Dr. M. succeeded in establishing his claim or not. It is true, his patent has turned out valueless. As Mr. Borland remarked in the debate upon this subject in the Senate, August 28th, 1852, "his patent, so far as the legal remedy extends, is worthless to him, although he has the legal right." And why worthless? Simply because the claim of exclusive right in such a case is absurd on the face of it. Mr. Smith, of Connecticut, took the true position, when he argued in the Senate that "this was not a patentable discovery." We can readily understand the issue of a patent for any new instrument or any process of art. But a patent for the exclusive use of any particular property of a given substance is beyond our comprehension. Suppose the first individual who discovered that a glass rod was rendered electric by rubbing with silk, had taken out a patent for the exclusive use of electricity. Would the deputy-marshal of the United States be called upon to apprehend and lead before the magistrate every man who rubbed a glass rod with a silk-handkerchief and therewith attracted bits of paper? If Dr. Franklin had taken out letters patent for the exclusive right to attract lightning from the clouds—supposing such an event possible,—would the authorities be obliged to scour the commons and confiscate every boy's kite? The philosopher might have patented his lightning-rod, undoubtedly, but if another investigator of nature

had discovered another and better method of protecting buildings from lightning, the patent would become of no effect. The cases are parallel. Dr. Morton might have patented any particular method of inhaling ether, but the right of any man to inhale it he could not touch. Suppose we reach up to our shelf, and, taking down the ether bottle, inhale a drachm or two of it—are we liable to an action at law for the offence? The thing is so totally absurd, that it defeats itself at once. Dr. M. was aware of this at the outset, and hence the mystification about "Letheon" which could not be kept up. We are sorry to be thus hard upon him, but we think he deserves it all.

We must also be permitted to observe, that this is the most curious Congressional document that has ever fallen under our notice. If it is gotten up by the committee and published at the public expense, Dr. M. may congratulate himself upon having secured enthusiastic friends at head-quarters. In addition to the report, we have numerous documents corroborative of Dr. M.'s claim, with lithographic copies of the certificate in his favor by physicians of Boston, and of the Monthyon medal given him by the French Institute. In the body of the report we have printed copies of his tickets in the Medical School of Harvard University, and also of a diploma (honorary?) from a college to the south of this latitude, which is without a date, and has the additional peculiarity that one of its professors, (writing himself A. M.,) signs and duplicates his signature as *Georgium*. This sort of publication may be all very right and proper, but it strikes us as an immense piece of *Barnumism*, similar to that upon which we have already animadverted. We cannot resist the conviction that this pamphlet has been got up by some of the patent-agents and "claim-brokers" who now abound in Washington, benevolently ready to assist—for a consideration—any one anxious to have a finger in the long purse of Uncle Sam.

Principles of Human Physiology, with their chief applications to Psychology, Pathology, Therapeutics, Hygiene and Forensic Medicine. By WILLIAM B. CARPENTER, M. D., F. R. S., F. G. S. *Fifth American, from the Fourth and Enlarged London Edition, with Three Hundred and Fourteen Illustrations.* Edited with additions, by FRANCIS GURNEY SMITH, M. D., Professor of the Institutes of Medicine in the Medical Department of Pennsylvania College, etc. Philadelphia: Lea & Blanchard, 1853. pp. 1091.

The popularity of Dr. Carpenter's "Human Physiology" in this country has been strikingly attested by the numerous editions which it has gone through. Not only every English edition has been reproduced, but in one instance a second American of one of the English editions was called for. The fourth and last English edition was completed only two months since in London, and we are indebted to the enterprising American publishers for its almost simultaneous appearance in the United States.

This edition is essentially a new treatise. The author has not only remodelled his work, with a view to the modifications introduced into the details of Physiological Science, since his last edition; but he has, in many important particulars, condensed, amplified, rearranged, and altered his original views upon various topics, which "the progressive maturation of his own opinions, and his increased experience as a teacher, have caused him to look upon in a light very different from that under which he had previously regarded them."

Without attempting a complete outline of the changes interwoven by Dr. Carpenter, in the "reconstruction" of his work, we may notice some of the more striking and prominent. Perhaps of these the most important is the introduction of the *second chapter* of this edition, which comprises a general view of the "Chemical Components of the Human Body, and the changes which they undergo within it." The scope of this chapter embraces many recent discoveries, and includes perhaps more of the topics which give Physiology its varying aspect, than any other department of it. Dr. Carpenter has succeeded admirably in presenting a "faithful and concise exposition of the present state of our

knowledge on this important subject." We shall especially advert only to his views on two very interesting points in this connection—"the respective relations of fibrin and albumen to the nutritive processes, and of the former to the gelatinous tissues"—and "the discoveries of M. Cl. Bernard in regard to the elaboration of sugar and fat in the liver."

The doctrines of Zimmermann and Simon, that fibrin is one of the elements of the blood "which have arisen in it from its own decay, or has reverted to it from the *waste* of the tissues," is rejected by Dr. Carpenter,

"as completely opposed by the whole physiological history of Fibrin, and more particularly by the gradual development of this ingredient in chyle, during its onward progress to the sanguiferous system; whilst, again, it seems to be entirely negatived by a comparison of the condition of fibrin with that of the known products of the disintegration of the tissues, such as urea or creatin, in which we see a marked tendency to the reproduction of purely physical or chemical conditions, (and this pre-eminently in the crystalline aggregation,) to the exclusion of those of vitality."

Fibrin, on the contrary, he believes, according to the commonly received views, to be endowed with vital force during the *assimilation* of the crude material furnished by albumen or casein, and to be "the first step in its conversion into living tissue." But, he adopts the surmise—

"that the peculiar vital powers, with which fibrin is endowed, give a special tendency to development into tissues of the fibro-gelatinous type, which may thus be almost said to be *pre-formed* in the blood; whilst the tissues of the cellulo-albuminous type *develop themselves* at the expense of some other element of the blood, possibly the globulin of the floating corpuscles."

As regards the elaboration of fat and sugar by the liver, Dr. Carpenter considers it to be the result of the disintegration of the tissues, which, in the descending process,

"resolve themselves into two classes of substances; on the one hand, saccharine, oleaginous, and resinous matters, analogous to those of plants in which carbon predominates; on the other, a set of compounds peculiar to animals, of which nitrogen is the characteristic ingredient. * * * * * The *sugar* generated by the agency of the liver, from the products of the waste or disintegration of the system that are contained in the blood, seems to be at once employed in supporting the combustive process by which the animal heat is maintained."

The chapter on "the Structual Elements of the Human Body,

and the Vital Actions which they exhibit"—which includes the general doctrines of Cell-formation and of Vital Force—is also new.

The chapter on the "Physical Characters, Chemical Composition and Vital Properties of the Blood" has been greatly extended and almost entirely re-written.

"The series of chapters on the several organic functions remain the same as in the previous edition; but important additions and corrections have been made in every one."

"It is in the chapter devoted to the Functions of the Nervous System, which constitutes one-fifth of the entire volume, that the greatest additions and alterations will be found. This subject, in its Psychological as well as in its Physiological relations, has occupied more of the Author's attention than any other department of Physiology; and he now offers the more matured points of his enquiries and reflections, with some confidence, that even if his views should hereafter require modification as to details, they will be found to be fundamentally correct, and to furnish materials of some value in Psychological inquiry, as well as in the study of Mental Pathology."—*Preface*, pp. 13, 14.

We have thus adverted to some of the leading "additions and alterations," which have been introduced by the author into this edition of his Physiology. They will be found, however, very far to exceed the ordinary limits of a new edition—"the old materials having been incorporated with the new, rather than the new with the old." It now certainly presents the most complete treatise on the subject within the reach of the American reader; and while, for availability as a text-book, we may perhaps regret its growth in bulk, we are sure that the student of physiology will feel the impossibility of presenting a thorough digest of the facts of the science within a more limited compass.

It is to be observed, that a large number of *references* have been incorporated with this edition; and "to this addition, no small portion of the augmented bulk of the volume is due."

The duties of the American editor have been performed with excellent taste and discretion. His additions have been limited to an "occasional illustration of the text," and a notice of such recent discoveries as have appeared in the journals, while the sheets passed through the press. The additional matter, though not overloading the text, will be found every where appropriate and valuable.

On Animal Chemistry in its application to Stomach and Renal Diseases. By H. Bence Jones, M. D., etc., London. John Churchill, 1852.

We have here a London copy of this excellent work, kindly furnished by M. Bailliere of New York. It does not purport to be a complete treatise upon the subjects mentioned in the title, but is composed of twelve separate lectures, illustrating some few of the varied diseases affecting the Stomach and Renal system.

The author in the commencement pays a merited tribute to Dr. Prout, whose well known work is admitted to be the "fons et origo" of most of the treatises on the affections which Dr. Jones now discusses.

The 1st Lecture is devoted to the consideration of Food, comprising all that is new and valuable under that head, and its relation to Air, Exercise, Respiration, &c. The 2d Lecture, on Digestion, contains much information on that subject, of value. From this to Lecture 3d the transition is easy. It considers the Blood, and furnishes all that is essential upon that important component of the animal economy. Lecture 4th commences the consideration of the Urine, beginning with Calculi. Lectures 5th and 6th consider respectively the quantity and Acidity of the Urine and Uric acid. These lectures demand more than a passing notice, as they are important in a chemical point of view. Dr. Jones does not believe the statement of Prout, that the acidity of the urine is dependent upon acid urate of ammonia, yet in confirmation of Prout's views we may mention that vol. li. of the Annalen der Chemie gives two compounds—lithate of ammonia and super lithate of ammonia. Dr. Jones, however, says, "the conclusions I have arrived at are that uric acid is combined with ammonia, but the urate of ammonia is modified in form and in solubility by common salt and other saline substances which exist with it in the urine." And again, "the so-called super lithate of ammonia, I consider to be a mixture of uric acid and urate of ammonia." As it is, farther observations are necessary to determine the existence of one or two compounds, and we do not arrogate to ourselves the power of determining the true state of the question.

Lecture 7th considers Oxalate of Lime and Sulphates. Dr.

Jones here introduces to the profession a new term, "sulphuric diathesis."

He promises, that at a future time he will notice more fully the variations of the sulphates in disease, and hints that there is a peculiar class of diseases in which the sulphates are in excess.

Lectures 8th and 9th consider the Alkalescence of the Urine. Lecture 10th, Albuminous Urine. Lecture 11th, Diabetes and Diuresis; and Lecture 12th, Relation of Urine to food and animal system and methods of examination.

The work is written in a free and off-hand style, and in a manner that evinces a thorough study of the subject before presenting it to the profession. In the rage for new things we too often pass by that which may appear trivial and unimportant in order to observe the grandeur of the new.

In the volume before us attention to this fact will help us to deduce from the observations of the writer, much of value to the practitioner. It has often occurred to us, that these are the only works where the connexions of physiology and pathology are demonstrated; very frequently it happens that in pursuit of physiological knowledge we are apt to lose sight of its application to pathology, or rather forget to make the application.

The book may be placed along with the manuals of Bird, Griffith, Warwick, &c.

It comprises 139 pages, and is plainly printed and neatly bound. To the student of animal chemistry it opens a wide field for observation, and one from which he can glean much. We have no doubt that an American edition would be hailed with pleasure. The increasing attractions this subject presents to the profession, have engendered a proportional demand for information, and this volume appears opportunely to supply the want.

It is well to have such books as these in one's library. To most, the works of Bright, Prout, &c., are inaccessible; and in the 139 pages, Jones has condensed much that is eminently practical and valuable, in his own enthusiastic manner. Space does not permit us to attempt a thorough analysis of the whole work, and we must therefore close this hasty sketch with a hearty commendation of it to all who are interested in this department of medicine.

First Principles of Chemistry for the use of Colleges and Schools. By BENJ. SILLIMAN, Jr., M.A., M.D., &c. *With Four Hundred and Twenty-five Illustrations. Twenty-fifth Edition. Re-written and enlarged.* Philadelphia: H. C. Peck and Theo. Bliss. 1852.

We have before us a copy of the twenty-fifth edition of this excellent work, and if any evidence of its value were needed, this fact alone would be sufficient at once to mark its popularity. The whole work has been re-written and to a great extent re-arranged, according to the standard facts and doctrines now received in chemical science. The work is divided into four parts. Part I. is devoted to the consideration of PHYSICS, embracing all that is usually taught in that connexion with chemistry, as Matter, Heat, Light, &c. Part II. considers CHEMICAL PHILOSOPHY, embracing the Laws of Combination, Nomenclature, Symbols, &c. Part III. is devoted to INORGANIC CHEMISTRY, treating of the Classification of the Elements, and the consideration of each in particular, with their combinations, &c. And "last, but not least," Part IV. comprehends ORGANIC CHEMISTRY, giving under that caption the Nature of Organic Bodies, the Vegetable Acids and Alkaloids, the Blood, the Nutrition of Animals, Plants, &c. &c.

The work by its title claims to be the "First Principles of Chemistry," and it has certainly attained that mark. It is in its style clear and perspicuous, and in its matter elaborate without becoming abstruse. It is admirably adapted to the wants of the beginner in chemical research, and on this ground claims the attention of the medical teacher as a class book in the office for students. In our opinion, it is eminently suited for this purpose—presenting to the tyro a book from which he can gather all that is necessary in this go-ahead age for raising the foundations upon which to build in the future, while it will furnish to the advanced student much important information in a form convenient for ready reference. We say this after having examined the work minutely, and finding much in it to awaken the mind and refresh the memory. It is already the "Text-Book at Yale College," and several similar institutions, where it has been adopted for the use of

those who consider that chemistry should be a component part of every liberal education.

The work consists of 544 pages (exclusive of the Index), of which number about 120 are devoted to the consideration of Physics, 17 to Chemical Philosophy, 200 to Inorganic Chemistry, and about 200 more to Organic Chemistry. In the latter part of the work considerable tact and care are evinced in the classification of the great mass of facts that have accumulated within the last few years in this department of chemistry. In fact, Organic Chemistry has of late attracted so much attention, although even yet not as much as is commensurate with its importance, that a chemical work without a full exposition of it is not now complete.

This department has been arranged under the supervision of Mr. T. S. Hunt, who has proved himself fully competent to the task. Emanating, however, as the major part of the work does, from the pen of a "Silliman," is the best evidence of its correctness and sound chemical reasoning. The book is copiously illustrated, and it has seldom been our pleasure to observe more accurate and beautiful wood-cuts. In its typography it will vie with many other works of more pretension, and in its general "getting up" it does a deal of credit to its publishers. We wish it an extended sale and a careful perusal.

Notice of the Life and Professional Services of William R. Grant, M. D. By HENRY S. PATTERSON, M. D., Professor of Materia Medica and Therapeutics, in the Medical Department of Pennsylvania College.

Dr. Patterson has presented a highly appropriate and interesting memoir of his late colleague, who, during a short professional career, and comparatively brief sojourn here, worked his way to no little distinction and deservedly high personal estimation.

Dr. Grant was a native of Nova Scotia, whence he emigrated to Philadelphia, in the year 1836, to matriculate as a pupil of Jefferson Medical College, where he graduated in 1839. "He was immediately appointed Demonstrator of Anatomy, and Curator of the Museum of Jefferson College, which situation he filled with credit to himself and advantage to his alma mater for

three years." In 1843, upon the dissolution of the original Faculty of Pennsylvania College, Dr. Grant formed one of an association which assumed the task of re-organizing the School; and his duties in this sphere, as Professor of Anatomy, were continued till his death, last Spring. As a teacher of Anatomy, he earned considerable reputation and popularity; and his labors were no doubt efficient in elevating the School to its present point of success. "In his professional relations, Dr. Grant was characterized by great amiability of temper, courteous deportment, and the strictest integrity."

General Pathology, as Conducive to the Establishment of Rational Principles for the Diagnosis and Treatment of Disease; a Course of Lectures delivered at St. Thomas' Hospital during the Summer Session of 1850. By JOHN SIMON, F. R. S., one of the Surgical Staff of that Hospital, &c. &c. Philadelphia: Blanchard & Lea; 1852.

This is the title of a new work recently re-published by Messrs. Blanchard & Lea, of this city. It consists of a series of highly interesting and instructive lectures delivered at St. Thomas' Hospital, London. Some of the new and apparently heterodox ideas therein advanced upon Pathological subjects, at first tempted us to cast aside the book, as one subverting doctrines hitherto taught and received; but when we examined the sound and cogent arguments, and beheld the unmistakeable array of evidence adduced by Mr. S. in support of his propositions, we were forced to the conclusion, that many of our long accredited and cherished opinions on the subject of disease could no longer be sustained by reason or supported by fact.

His views are plainly and concisely stated, and in such an attractive manner, as to enchain the attention of the reader; and should they be adopted by the profession at large, are calculated to produce important changes in medicine. Physicians and students will obtain from its perusal not only the latest discoveries in Pathology, but that which is even more valuable, a systematic outline for the prosecution of their future studies and investigations. Altogether, we look upon it as one of the most satisfactory and rational treatises upon that branch now extant.

THE MEDICAL EXAMINER.

PHILADELPHIA, FEBRUARY, 1853.

TRIBUTE TO DR. BROWN-SÉQUARD

At a meeting of the medical gentlemen who have attended the lectures of Dr. E. Brown-Séquard, held Dec. 14th, 1852, Dr. Warren was called to the chair, and the following resolutions, offered by Dr. Henry J. Bigelow and seconded by Dr. Bowditch, were unanimously adopted, after amendments by Dr. Bartlett and Dr. Coale:

Resolved, That having attended a course of lectures by Dr. Brown-Séquard, illustrated by dissections and experiments upon subjects connected with physiology, and especially with that of the nervous system, we are desirous of expressing to Dr. Séquard the gratification which we have received from these lectures, which have been the result of extended original research, which have been eminently characterized by a spirit of rigid induction, and which have conveyed many practical hints upon pathological subjects. Therefore

Resolved, That we hereby offer our thanks to Dr. Séquard for the gratification and profit we have received from his very interesting lectures. That we commend these lectures to those members of our profession in other cities who may not have had the pleasure of hearing them; and that we indulge the hope that Dr. Séquard may find it convenient to continue his lectures here at some future time.

CORRECTION.

The paper of Dr. Alison's, communicated by Dr. S. Lewis, in the January Number of this year, should have been accredited to the "Proceedings of the Royal Soc. of Edinburgh," instead of *Edinb. Phil. Trans.*

NEW JERSEY MEDICAL INSTITUTE.

A new summer school has been established at Burlington, with which Dr. Joseph Parrish, Editor of the N. J. Medical Reporter, Dr. B. H. Rand, Dr. S. S. Brooks, Dr. J. B. Coleman and Dr. L. Read are associated. They offer many advantages to students during the summer season, and we doubt not will receive a full share of patronage. We wish them success.

CABINET OF MINERALS.

We call the attention of our readers to the following letter from Dr. Coxe. The collection is a very valuable one.

MY DEAR SIR,—May I request of you the favor to announce in your "Examiner" my intention of disposing of a very large and valuable Cabinet of Minerals, the collection of more than thirty years, and at an expense of several thousand dollars. The specimens are mostly of large size and beauty, and well adapted for a College or Public Institution. A large collection of models of the forms of crystals, constitute a part of the Cabinet; also, two large and fine specimens of hexagonal columns of Basalt, from the Giant's Causeway, in Ireland.

I am very truly your friend and obedient servant,

JOHN REDMAN COXE.

DR. SMITH.

Jan. 5, 1853.

At a stated meeting of the Northern Medical Association, held January 6, 1853, the following members were elected Officers for the present year:

President—Dr. Benjamin S. Janney.

Vice President—Dr. N. L. Hatfield.

Counsellors—Drs. Joseph R. Bryan, John F. Lamb, Wm. Mayburry, Isaac Remington and John Uhler, Jr.

Secretary—Dr. J. Henry Smaltz.

Corresponding Secretary—Dr. Isaac Remington.

Reporting Secretaries—Drs. John Rhein and C. P. Turner.

Delegates to the American Medical Association—Drs. L. Curtis, B. S. Janney, N. L. Hatfield, J. F. Lamb, R. J. Levis and Isaac Remington.

VIRGINIA MEDICAL AND SURGICAL JOURNAL is the title of a new aspirant for favor in Richmond, and edited by George A. Otis, M. D. and H. L. Thomas, M. D. The first number will be issued on April 1st, 1853, and the succeeding numbers will appear monthly.

The objects proposed in its publication are the diffusion of *Medical Knowledge* and *Intelligence;* the advancement of *Science;* and the support of the dignity and interests of the Medical Profession.

Each number will consist of eighty large octavo pages, containing Original Papers, Memoirs, and Reports of cases; an account of the transactions of Medical Societies in Virginia; a Summary of Improvements and Discoveries in Medical Science, at home and abroad; Reviews and

Bibliographical Notices; and a portion of a Standard Work in some important Department in Medicine. Price, $5 a year.

We welcome our new friends into the editorial fraternity, and assure them of our hearty wishes for their success. There is material and talent enough, and to spare, in the Old Dominion to support and encourage another good Journal.

MEDICAL NEWS.

Dr. J. B. BIDDLE has been appointed lecturer on Materia Medica and Therapeutics in the *Philadelphia Medical Institute.*

From the well established reputation and success of Dr. Biddle as a teacher, we predict increased popularity to the school with which he is connected.

DR. BERNARD HENRY has been appointed to the chair of Physiology in the same school. S.

SINGULAR INVESTIGATIONS IN A TRIAL FOR MURDER.—The following curious case has excited great attention in the law courts of Berlin:

Sept. 10, 1849, some peasants found on the bank of a rivulet, which flowed into the Spree, the body of a man, whose head had been detached by an incision carried between the first and second dorsal vertebræ. The head had been so much disfigured by the assassins that recognition was impossible. Near the body was a small cane, a hat, and a box of allumettes; some of the clothes were remaining on the trunk.

The day following two physicians drew up a report, which was unsatisfactory and imperfect. Some time afterwards they both in court declared, together with the magistrates present at the examination, in answer to some questions, that there were no cicatrices from scarifications, nor marks of tattooage upon the body.

A girl came forward, and stated, that from the accounts published in the Berlin journals, she felt sure the deceased was her husband. The body was disinterred, and she recognized it by the external organs of generation, as well as by the clothes. Yet the witness was found to be a prostitute, who never had been married in her life. Other researches led to the supposition, that the assassin of the unknown individual was a cattle merchant, named Gottlieb Ebermann. These suspicions, however, did not last long, for there came reason to believe, that Ebermann was the man murdered. It was said of him, that he might be recognized by traces of the cupping scarificator on the wrists, and tattoo marks of

a heart and of the initials "G. E" on the left arm, both of which points of identification were asserted by the very surgeons who had bled him. But Ebermann's sisters and wife stated, that they knew nothing of such marks, consequently there was a second exhumation, five months after the death, but no traces were found on the body. The wife's evidence was not considered valuable, as she had been only recently married and much separated from her husband. A person then came forward, and declared that he had seen and spoken to Ebermann within four-and-twenty hours; he, however, was proved a madman. Lastly, a mistress of Ebermann stated positively that the little cane found near the body belonged to a man of small stature, once a postilion, now a brigand, named Schall, at whose lodgings Ebermann's own cane had been seized. The girl recognized the dress, and particularly the braces, which she had herself worked. There was a third exhumation, December 11, 1851, twenty-six months after the death, when the girl recognized the body by something peculiar in the teeth and the beard. On August 11, 1851, this same girl had been nearly assassinated; doubtless by the accomplices of Schall, then in prison. The question as to whether the scarifications and the tattoo marks, seen upon Ebermann's body by competent witnesses, could by possibility become effaced by time, was referred to M. Caspar of Berlin. In his report, taken from the observations made in a large asylum for aged and invalid soldiers, a class upon whom tattoo marks are common, he states that out of 36 examples, in 3 the tattooage had become faint with time; in 2, the marks were partially effaced; in 4, they were completely obliterated: consequently, says M. Caspar, the marks of tattooage can disappear. A witness came forword, and declared, during the investigation, that at 15 he had tattooed himself on the arm with cinnabar, and that the marks had become entirely effaced. The conclusion of the trial was, that Schall was condemned to death.

In *L'Union Médicale*, Nov. 16, 1852, Dr. Chereau justly observes, respecting Caspar's report, that it is not one which should influence a judicial decision, for it is not stated at what age, with what substance, and in what manner, the marks were produced in the four instances where there was complete obliteration. Are the men to be trusted? How many years elapsed before the marks became effaced? The question cannot be considered in any way satisfactorily settled as it now stands; indeed, Caspar's assertions tend to raise doubts, which heretofore did not exist, upon a point which might be most important in a prisoner's favor, viz., the persistence of these stains. There is evidence that

the absorbent glands in the neighborhood of a tattoo mark become filled with pigment. At the time of writing this report, there is in the dissecting-rooms attached to St. Bartholomew's Hospital, the body of a native of one of the islands of the Eastern Archipelago, whose skin has been ornamented to an extent but rarely seen. The whole back, from the sacrum to the shoulder, is covered with circles, radiating stars, and feathers; the arms and the thighs are both marked, but the front of the body is comparatively clear. The absorbent glands in the groin and about the axilla were of deep black hue; those in the neck of the ordinary white color. Mr. Coote, the demonstrator of anatomy, succeeded in dissecting out some absorbent vessels leading to the glands in the thigh, filled with black pigment in long streaks. These indications of the action of the absorbents were however few, and the tattoo marks existed everywhere with as much clearness apparently as at the time when they were first made.

A similar remark may be offered respecting the possibility of the disappearance of cicatrices. If there have been a complete loss or division of integument in its whole thickness, the mark remains obvious till decomposition after death destroys the tissues. If the skin be only partially destroyed, there ensues a cicatrix of a different kind; one much more resembling the natural structure of the skin, unattended with contractions, and capable of becoming very faint, and liable to be overlooked, except upon close examination. We have no hesitation of expressing our opinion that Caspar's report does not tend in any way to invalidate the statement which has heretofore been received in courts of law—namely, that tattoo marks and cicatrices are indelible.—*London Med. Times and Gaz.*

[The following Communication was accidentally omitted in the Original Department. It is therefore introdueed in this place.—Eds.]

The Modus Operandi of Acids in Scurvy. By Wm. H. White, M. D.—In presenting the following views to the notice of the medical public, it is not so much the object of the writer to enter into detail as to the symptoms and appearance of the disease termed "Scorbutus," as it is to advance a few ideas relative to what he believes to be the state of the blood and the modus operandi of acids and vegetables containing acids, and to shew forth the reason why, if possible, it is, that these articles should, and do operate beneficially in the cure of this disease.

The disease *itself* has been treated of by nearly all writers on medicine since about the middle of the sixteenth century. And all have

advanced, in their different essays, the same idea relative to the state of the circulating fluid. They speak of it as if there were a deficiency of some of its constituent parts, which is supplied to the blood by the acid administered for the cure of the disease, and the deficiency being removed, the patient is restored to health.

That the seat of the disease rests entirely in the blood, is admitted on all sides; and that medicines prove of little benefit unless at the same time acids or fresh vegetables be administered, is as unanimously admitted.

But the ground upon which we wish to differ in opinion from those invariably expressed by different writers is, that there is actually *no* deficiency in the blood, but on the other hand an excess, and that excess an alkaline principle which successfully opposes the taking place of that chemical change which the blood should undergo in order to be of a proper chemical constitution. This alkaline principle (soda or potash) exists in the blood in excess, owing to the patient having been deprived of the food from which the system might obtain acid in order that it be neutralized, and the salts of the blood be formed.

If we examine the blood taken from the arm of a scorbutic patient, it will be seen to have undergone considerable chemical change, which is manifested by its very dark appearance, and its being in a completely dissolved state,—not coagulating unless there has been inflammation present.

Now, should we take such blood as soon as drawn from the arm, and add to it an acid, it will assume its natural appearance and color, and will coagulate the same as that taken from the arm of a healthy individual. In like manner will the acid operate upon the blood of a scorbutic patient when given him, by its being taken into the circulation and restoring the *blood* to health—not by the blood taking and assimilating a portion of the acid to itself merely,—but by its producing a chemical change in the blood: The acid, in its round with the circulation after it has been absorbed, comes in contact with the alkaline principle (soda or potash) which is in excess, and neutralizes it and forms the salts of the blood. The system having been previously deprived of the material from which it might obtain the acid to produce this change, the alkalies have been allowed to increase to such an excess as to produce the disease. And the very moment the patient has administered to him the acid or the food containing it, he commences rapidly to advance towards the stage of perfect recovery.

If we were to credit one class of writers we would be led to believe that the disease consisted in an excess of "fibrine," and on the other

hand, to credit a second class, that it consisted in a *deficiency* of fibrine and an excess of red corpuscles. But we believe the most rational conclusion is, that the blood possesses alkaline principles in excess, and the acid, by neutralizing them, forms the salts to which the blood is legitimately entitled.

Philadelphia, Jan. 1853.

RECORD OF MEDICAL SCIENCE.

MATERIA MEDICA AND THERAPEUTICS.

MEDICAL SOCIETY OF LONDON.

SATURDAY, DECEMBER 4, 1852.—MR. BISHOP, PRESIDENT.

Dr. DE MERIC showed to the Society the saccharine capsules of copaiba and cubebs, prepared by M. Jozeau, under the name of Copahine-Mège, which have been described in a late number of this journal, (see THE LANCET, vol. ii. 1852, p. 422;) and as this was neither a a secret nor a patented remedy, he was induced to try it in his practice. He stated that he had found them very efficient in the treatment of gonorrhœa, as the mouth did not perceive the taste of the copaiba, and the stomach did not revolt against the drug. Dr. De Méric observed that his patients took the capsules without repugnance, and never complained of any gastric disturbance. He was sure that many of the fellows would find this kind of sugar-plums very convenient in private practice, as they could be carried in the waistcoat-pocket, and taken at leisure. The speaker touched upon several other points, which we need not repeat here, as they may be found in the number of this journal alluded to above.

Mr. CHIPPENDALE wished to know whether the capsules were sold at a high price. He asked the question because he might be inclined to use them in his dispensary.

Dr. DE MERIC was not prepared to give the information required, as he had confined himself to the pharmaceutical bearing of the matter. But he might venture to say that M. Jozeau would probably charge hospitals and dispensaries a very low price. He thought, at the same time, that the capsules were more calculated for private than public practice.

The PRESIDENT inquired the actual amount of copaiba and cubebs in each capsule.

Dr. DE MERIC could not bring to mind the exact quantity; but we have since been informed that it is sixteen grains of prepared copaiba and about two grains of cubebs for each capsule.

OBSTETRICS.

Scirrhus of the Uterus complicated with Pregnancy; Funis presentation; Delivery.—Mr. I. Brown read the following case: Mrs. W——, aged thirty-five, an out-patient of St. Mary's Hospital, was under my care from May to July with scirrhus of the os and cervix uteri. The catamenia had ceased for several weeks, but there was a good deal of offensive serous discharge. Her health became so seriously injured, that she was unable to continue her attendance as an out patient, and I lost sight of her until November 18th, when I was requested by Mr. Hammond, one of the district accoucheurs of the Maternity, to visit her. I found that she had been seized with symptoms of labor the previous day, that the waters had escaped, and that the funis had descended six or eight inches through the os externum; but the thickened edges of the uterus seemed quite unyielding, and the labor made little or no progress. The patient became excessively exhausted, requiring ammonia, brandy, and strong beef-tea. I suggested that they should wait and see if the os dilated a little more, and if it did that delivery should be attempted by turning. Turning was accomplished the following day by Mr. Bullock, resident-surgeon to St. Mary's Hospital, and Mr. Hammond, after considerable difficulty. The fœtus was one of seven months, and had been dead some five or six days. The patient remained in a very exhausted state after her delivery, and when Mr. Brown last saw her, was evidently fast sinking.

In answer to questions, Mr. Brown could not say how long the disease had existed, but he supposed for some time. About half the os was involved in the ulceration.

Dr. Routh recollected the case of a woman in Vienna, in whom three fourths of the os were involved in the ulceration. The woman was four days in labor, and died four or five days after delivery. The delivery was effected, not through the os, but on one side of it. The woman died of peritonitis.

Dr. Barnes said that the practical question in this case was, as to the propriety of effecting premature delivery to avoid the passage of a large body through the diseased os. Would such a proceeding give the patient a chance of recovery? He thought that the cases of Dr. Rowland had proved the contrary, and that as death would result whenever delivery took place, life of course would be prolonged by allowing the woman to go the full time.

On the Pathology and Treatment of Sanguineous Pelvic Cysts.—Dr. Tilt read a paper on a variety of pelvic tumors, on which the French pathologists have during the last year thrown great light, the cyst being in such cases formed by a considerable quantity of blood effused in the pelvic portion of the peritoneum, or externally to the peritoneum, so as to constitute extra-peritoneal or intra-peritoneal cysts. Dr. Tilt first related several cases from his own practice, from that of Dr. Bell of Glasgow, and from that of Dr. H. Bennet; by which it appeared that the disease was preceded by menstrual irregularities, and that its

origin generally coincided with the suppression or the non-appearance of the catamenia; after which ensued hypogastric swelling, then local pelvic peritonitis, on the subsidence of which a globular tumor was found to fill, more or less, the pelvis, interfering with the passage of both fæces and urine. Dr. Tilt then elucidated the pathology of the previous cases by several others which had terminated fatally in the Paris hospitals, and where the post-mortem examinations were exhibited to the Société de Chirurgie of Paris. The causes of extra-peritoneal sanguineous cysts were extremely obscure. In a case related in "Guy's Hospital Reports," the effusion of blood was caused by the rupture of an aneurismal sac. In another, occurring in the practice of the celebrated Margolin, it was caused by the rupture of varicose subperitoneal veins. Light had been thrown on the causes of the intra-peritoneal variety by the post-mortem appearance of a patient under the care of Denonvilliers, of the Hôpital Ste. Marguerite, in Paris. The blood was found to have come from several small ovarian cavities, some of which still contained blood-clots; and in discussing the case, Lenoir, Nelaton and other surgeons of eminence, admitted that in this and similar cases the pelvic tumor was formed by an ovarian hemorrhage taking place during the process of ovulation. Dr. Tilt admitted the explanation, and gave it strength by reminding the Society that during the process of ovulation the ovaries greatly increased in size; that in the normal state the blood-clot taking the place of the ovum was about the size of a cherry; that microscopical observers had sometimes found the capillary vessels much enlarged and broken in the vicinity of the vesicle, and the ovarian tissue so softened that it would tear on the slightest touch, and let the blood-clot escape. Dr. Tilt gave a still surer footing to the views of the French pathologists on this point, by relating a case which had lately occurred in the Lyons hospital, where, after flooding at three successive menstrual periods, peritonitis supervened, and on opening the body, a blood-clot of the size of a horse-bean was found protruding between the rent lips of the ovarian follicle. Having thus established the pathology of intra-peritoneal sanguineous cysts, Dr. Tilt proceeded to illustrate their history by other interesting cases which had lately occurred in the Paris hospitals. One, for instance, was mistaken by Malgaigne for a fibrous uterine tumor. He slit up the neck of the womb to enucleate the supposed tumor, but, finding his mistake, he punctured it, and gave issue to a large quantity of syrupy blood. Hemorrhage from the wounded artery of the neck of the womb could not be controlled, and the patient died. Another case was mistaken for ovarian dropsy, others for metritis. Dr. Tilt observed that sanguineous pelvic cysts did not usually terminate fatally, but often by resolution; the lining membrane of the cyst absorbing its contents, which thus became thicker and thicker, and the tumor diminished. Sometimes, however, the contents were evacuated by rupture of the cyst per rectum or per vaginam. Dr. Tilt recommended the cysts to be left to themselves when small, and to increase absorption by moderate venesection, purgatives and low diet; but if they attained a considerable volume, so as to interfere much with micturition and defæ-

cation, he advised the tumor to be punctured per vaginam with a long trocar. 1st. Because this plan presents a better chance of avoiding wounding the arteries. 2d. Because the trocar being left in the wound permits the gradual evacuation of the blood. 3d. Because it allows the possibility of making injections. But Dr. Tilt likewise admitted the necessity of widely opening the tumor should it contain large fibrinous clots, or if it gave rise to a fetid discharge. With regard to the frequency of the disease, Dr. Tilt did not consider it a common occurrence; and although some twenty cases had been published during the past year by eminent French surgeons or obstetric practitioners, it was so little known in England, that several talented physician-accoucheurs had assured the author that they had not met with it. Dr. Tilt, therefore, submitted, that they might have been mistaken for other complaints; for metritis and incipient pelvic abscess, when the collection of blood is small; for an ovarian tumor when the collection is very considerable; and sometimes for pelvic abscesses, as in Dr. Bell's case, when the blood-clots were mixed with pus. He, therefore, believed that similar cases might be found recorded in English journals by those who would have time and patience to hunt for them.

Dr. De Meric inquired if Dr. Tilt had noticed pulsation in the tumors which he had described. In the description of one of the cases, at least, he had spoken of enlargement of the vessels, and of fibrinous deposit, &c.; might not the tumor in this instance have been aneurismal? In those cases in which recovery had taken place, which was the pathological process by which this was effected? The author had stated that he considered that hemorrhage had occurred from the ovary in these cases at some time or other during menstruation. Now this was no doubt from excitement of the ovary. What, then, was the cause of the hemorrhage? Had coïtus anything to do with it, or any other stimulant? If we could trace the hemorrhage to any such cause, we might warn the patient. There were, no doubt, however, other circumstances connected with the menstrual period which were favorable to the development of these tumors.

Mr. Brown regretted that so little of the paper allowed of discussion, as only one of the cases had fallen under the observation of Dr. Tilt himself. He (Mr. Brown) was inclined to think that one, if not two, of the cases, was an iliac aneurism. In the case related as occurring in Dr. Tilt's own practice, no doubt the use of the trocar was proper; but he (Mr. Brown) did not think it would be so in the other cases. He did not agree with Dr. Tilt that these tumors were likely to be mistaken for uterine enlargements, as the uterus could be distinctly felt on examination; but he had seen instances in which they might be mistaken for ovarian tumors. In one case he recollected a sanguineous swelling near to the uterus, which burst into the rectum, and had been mistaken for an ovarian tumor. When the nature of the tumor could be determined by the history, and the mischief was localized, the plan of treatment recommended in the paper was proper, but it should not be resorted to when the swelling came on suddenly. Then a very different mode of proceeding was necessary. He regarded

these cases generally as a sort of uterine apoplexy from obstructed menstruation, and situated in the cellular tissue. He hoped at a future time Dr. Tilt would bring forward cases which would fall under his own observation, as some, no doubt, soon would.

Dr. SAMUEL GRIFFITH found the same difficulty as the last speaker in discussing the paper; but he would briefly relate two cases which had fallen under his own notice, and which appeared to be somewhat analogous to the one detailed by Dr. Tilt. The first was the case of a woman who had been ailing for some time, and had pain and hardness in one of the ovaries, with occasional shivering, and a mucous discharge from the vagina, unaccompanied by ulceration of the cervix uteri. She suddenly became worse, and symptoms of acute peritonitis set in without any apparent cause. Treatment was unavailing, and she died on the seventh day. On examination, it was found that profuse hemorrhage had taken place into the cavity of the peritoneum. It was not confined to the pelvis, and had given rise to suppuration. The point from whence the hemorrhage proceeded could not be detected, and he could not therefore assert that it was from the ovary. In such a case none but general treatment could be adopted, as there were no symptoms to indicate from what cause the disease arose. In another case, which was under treatment in St. Thomas's hospital, the subject was an over-worked servant-girl, somewhat out of health from suppressed menstruation. She had a tumor in the lower part of the abdomen, which was swollen as large as in the seventh month of pregnancy. It resembled pregnancy also in shape. It was painful and tender on pressure; the os and neck of the uterus were healthy. At the end of two months the tumor suppurated, and opened externally in the lower part of the abdomen. The tumor, however, remained of the same size and of the same stony hardness. There was no vaginal discharge. This case, at its termination, might be found to bear some analogy to the cases detailed in Dr. Tilt's paper.

Mr. DENDY regarded Dr. Tilt's cases as mere effusions of blood into the cellular membrane, round which a cyst had been formed, and a tumor was the result. Cases somewhat analogous were occasionally observed during parturition, from effusion of blood into the cellular membrane of the vagina.

Dr. CHOWNE would not enter into the discussion, as he had not seen such cases as those detailed, which were very rare; and if Dr. Tilt waited until he could speak largely from his own experience upon the matter, as was suggested by Mr. Brown, it was probable he would long remain silent. He regarded the cases related as differing in their character, but that generally these blood-tumors were the result of effusion of that fluid into the cellular membrane. He found fault somewhat with the title of the paper, which, strictly speaking, was not on "*pelvic* sanguineous tumors."

Dr. TILT, in reply to Dr. De Méric's suggestion, that some of the cases described might have been cases of aneurism of some large abdominal vessel, observed, that with Dr. Lever's patient he had stated that this was the case, and it might therefore be met with again

as a cause of extra-peritoneal sanguineous tumors; but that the other seven cases related could not be confounded with aneurism, for in three out of the seven there were post-mortem examinations, and the other four were related by accomplished observers, able to detect a pulsating tumor, of chronic growth, from those described in the paper. Dr. De Méric also asked whether ovarian inflammation did not play a part in this disease; but Dr. Tilt thought that care should be taken in ascribing every morbid action to one pathological condition, and said that, when taking into consideration the action of the ovaries, we must not think of these organs as they are met with in the dead body, but as seen by Verdier and Dr. Oldham, when accidentally placed outside the inguinal canal, in which case, at the menstrual periods, they have been observed to swell *enormously;* that we must think of the softened state of the ovarian tissue surrounding the rent follicle of the ruptured capillaries, attested by microscopical observers, and also of the ruptured blood-vessels seen by them. Dr. Tilt believed, with the French authorities already quoted, that in these cases of *intra-peritoneal* sanguineous cysts, the blood trickled from the rent capillaire, and falling into the recto-peritoneal pouch, caused peritonitis, and therefore a cyst containing blood. Such were Dr. Tilt's views of the pathology of such cases. He could not understand how obstructed circulation could account for them, as had been suggested by Mr. Dendy; he did not admit that the blood in such cases was merely effused in the areolar tissue, for on post-mortem examinations it was proved that the blood had broken down the areolar tissue, displacing it and the pelvic organs so as to constitute a cyst. Neither could he accept Mr. Brown's explanation, that such sanguine collections were formed by the blood permeating the outward surface of the womb, because, whenever death had afforded an opportunity of investigating the case, a less problematical explanation had been found. Dr. Griffith did not see how fluctuation could be felt if the tumor contained blood, but Dr. Tilt reminded him that in some of the cases, the blood, like menstrual fluid in a distended womb, did not coagulate, being a dark syrupy fluid. Fluctuation was of course less marked or imperceptible when the blood was much coagulated, and when its liquid portions were absorbed. To Dr. Chowne's objection, that some of the tumors described could not be fairly called sanguineous, since the contents were purulent as well as sanguineous, Dr. Tilt added that the peritonitis, by which the blood was confined in the pelvic cavity, might pass to the stage of suppuration, and then pus would be voided with the blood. It had been suggested by Mr. Brown that as the cases described were very common, it was a pity Dr. Tilt had not waited so as to build his paper upon his own researches only; but Dr. Tilt replied that his reason for bringing the subject before the notice of the Society was the fact of such cases not having been noticed in England; and he considered it a singular circumstance that Mr. Brown should have frequently met with cases of sanguineous pelvic cysts, when he had been informed by Dr. Murphy and Dr. Oldham, that in their extensive fields of inquiry they had not met with them; that Dr. Chowne and Dr. H. Bennet had but seldom done so; and that

they were considered uncommon by many French pathologists who during the past year had drawn attention to the subject.—*Lancet.*

Congenital Occlusion of the Vagina.—Throughout the medical journals are scattered notices of congenital occlusion of the vagina, sometimes combined with obvious arrest of development of the uterus,—sometimes with simply an imperfect condition of the vaginal orifice. We have upon former occasions mentioned the particulars of cases of extroversio vesicæ in the male, where the generative organs were incompletely formed; and we recall an observation made by Mr. Coote, that the arrest of development was not confined to the external parts, but that it extended to the whole segment of the body and the system of organs in which these imperfect structures were situated. The same remark is applicable to congenital occlusion of the vagina. In some instances the nymphæ alone are adherent; in others, one, two, or more inches of the anterior part of the vagina are obliterated; the uterus may be ill formed, and the ovaries in no condition to mature ova, but in all cases the arrest of development of the internal parts is in relation with the amount of external deformity. The practical points connected with this law are equally applicable to the two sexes. In the male, suffering from extroversio vesicæ and fissured penis, the bones of the pelvis are usually small, and the pelvic cavity is shallow; the bladder, almost an abdominal viscus, retains its fœtal connexions to the peritoneum; the prostate gland is small and rudimentary; there is no trigon vesicæ uncovered by peritoneum; consequently we read without surprise of surgeons wounding the serous membrane with the trochar in their attempts to establish a rectovesical fistula as a preliminary step in the cure of this malformation. As regards the female, we may infer, that if with congenital occlusion of the vagina there be, at the time of puberty, no indications of the menstrual secretion, both external and internal organs are in a condition which cannot be relieved by surgery; but if the uterus, to all appearance, be healthy; if it become in course of time distended with menstrual secretion, and the patient suffer the usual pains and inconveniences, we may conclude that there is a vagina, an os tincæ, uterus, and ovaries, but that from some cause the external orifice, and an inch or more perhaps of the external meatus, are obliterated and adherent. It follows, then, that an operation, carefully performed, may relieve the patient of this distressing affliction; the vagina may be opened beyond the occlusion, and a canal may subsequently be established by the use of pessaries.

In the *New York Journal*, 1845, there is an account of a young German woman suffering from occlusion of the vagina. She had the sexual passion, but had never menstruated. Her general health was good. On inspection, it was found that she had no vagina. There was no abdominal swelling. Dr. Watson introduced into the urethra a silver catheter, which he committed to the charge of an assistant. Then passing the fore-finger into the rectum, he divided the parts at the natural situation of the vagina, between the catheter and the finger. After dividing an

inch and a half of tissues, the parts yielded to pressure, and the passage was restored to the os tincæ; it was, however, small, and the uterus was atrophied. The passage was kept open by the pessary, and ultimately rendered fit for all its functions by continued distension.

The *Medical Times*, 1845, contains some remarks upon this affection by Dr. Vaudroy; and Maissonneuve has performed an operation similar to that of Dr. Watson and of Mr. Wormald, who has lately successfully treated a case in most points similar to that which we have noticed above from the *New York Journal.*

Emma W., aged 19, a well formed and not bad looking girl, with an unmeaning and vacant expression of countenance, was admitted into St. Bartholomew's Hospital, Nov., 1852, under Mr. Wormald, with complete occlusion of the vagina. The labia, when open, seemed to bound a wall of mucous membrane, in which were seen both clitoris and urethral orifice, but there was no passage towards the uterus. The finger introduced into the rectum came in contact with a solid, elastic, bulging tumor, evidently the uterus distended by menstrual secretion, and pressing upon the anterior wall of the rectum. There was no apparent indication of a vagina, but the uterus bulged downwards to within about two inches of the surface of the perinæum. The patient suffered considerable inconvenience from pain in the back and loins at the menstrual periods; the bowels had become habitually costive. The rectum having been emptied by proper remedies, and the viscera being in a healthy state, Mr. Wormald performed the following operation, December 3:—Chloroform having been administered, and the bladder and rectum previously emptied, the patient was tied, as in the operation of lithotomy. Mr. Wormald made an incision in the perinæum, extending from the left labium obliquely downwards and outwards to the ramus of the ischium in the direction of the os tincæ, and in the interval between the urethra and the rectum, the coats of the latter viscus being indicated by the presence of the forefinger of the left hand introduced per anum. After carefully cutting in this narrow interval for about an inch and a half to two inches, Mr. Wormald came upon some yielding tissues, and then to the uterus. A trocar passed readily (and it was suspected through the os tincæ) into the cavity of the organ, and there was discharged fourteen ounces of thick, grumous, bloody fluid; a gum elastic catheter was introduced, and the patient was then removed to bed. There was an escape of bloody fluid during the next thirty-six hours, but this has slowly subsided; the patient has suffered occasionally from retention of urine, but there have been no unfavorable symptoms, and there is every prospect of a successful result.

Mr. Callender, the house-surgeon, examined the fluid microscopically, and found that it consisted of epithelial scales, and altered blood discs.

There is reason to believe that, in the present instance, the vagina, which was obliterated to an extent of two inches from its orifice, yet existed above that spot, but was occupied by the distended uterus, which has sunk much nearer the perinæum than natural, owing to its great enlargement.—*London Med. Times and Gaz.*

SURGERY.

Re-appearance after Excision of a Non-malignant Growth.—Second Operation. Under the care of Mr. Cock.—John Markman, a farm laborer of robust health, now aged seventy-one, was under Mr. Cock's care five years ago on account of a tumor, the size of a hen's egg, situated on the outer and back part of the right thigh, which had been slowly increasing for five years. It had given him no pain, and his health had not in the least declined since its appearance. Mr. Cock dissected it out, which was easily done, since, although adherent to the skin, it was loose and movable on the parts beneath. It was a lobulated, firm, fibrous-looking mass, not succulent, surrounded by a thin capsule of cellular tissue, the completeness of which rendered it not difficult to be certain that the whole was removed. The wound healed kindly, and the man left the hospital.

In the beginning of November of the present year he again applied for admission, a growth nearly the size of the former one having made its appearance close to the cicatrix. He stated that it began to grow about six months after the operation, and had again increased in size very slowly and painlessly. It now consisted of two portions, connected at the base, one much larger than the other, and each presenting a rounded, well-defined outline. The skin was not ulcerated, and had never been so.

On Nov. 2, Mr. Cock again excised the tumor, removing, as on the former occasion, the superjacent and attached skin. The section of the growth exhibited precisely the same features as before; it was surrounded by a thin capsule, was deeply lobed, and, when cut, the surface became very convex. Its texture was firm, whitish, and crossed in a radiating direction by bands of fibrous tissue. Mr. Burkitt examined its minute structure under the microscope, and discovered the kind of cells characteristic of M. Lebert's "fibro-plastic tumors." The wound soon healed, and the man has now returned home.

We may remark, that all the main points in the history of this tumor were strongly in favor of its being non-malignant. It had caused no pain, had never ulcerated, had existed for ten years, yet no glands had become enlarged, nor had the health of the patient ever been in the least deteriorated.—*Ibid.*

Aneurism after Venesection cured by flexion of the Limb.—M. A. Thierry has lately published, in the *Revue Clinique*, a case of false aneurism at the bend of the elbow, occurring after bleeding from the arm, which he successfully treated in the following manner:—The arm was forcibly flexed, the limb carried over the head, and the hand fixed on the opposite cheek. The patient remained in this painful position for five days, after which time it was changed to that which M. Velpeau generally adopts for fracture of the clavicle—viz., the arm fixed across the chest, and the opposite shoulder. A fortnight after the beginning of this treatment, the tumor was reduced to the size of a nut; the arm was then kept in the same position for another fortnight, after which no sign of any pulsating tumor remained. M. Nélaton, who saw the patient, considered

the case a very remarkable one, as the aneurism has disappeared, and the vessel remains permeable at the seat of the wound. M. Thierry very justly says, that one case is not sufficient to prove the efficacy of any method of treatment, but that the results here obtained are well worthy of attention; he thinks that further trials will perhaps lead surgeons to treat aneurisms of the limbs by forced flexion, femoral aneurism by flexion of the thigh upon the pelvis, and popliteal aneurism by flexing that leg upon the thigh. If we mistake not, M. Thierry's method is founded upon the principle of pressure, and carried out with a great deal of pain and inconvenience to the patient. If the flow of arterial blood through the sac can be graduated, moderated, and rendered very slow by simple and painless means (as is proved by experience,) it is cruel to torture patients by placing them for a whole month in the position given by the immortal statuary to Laocoon.—*Lancet.*

PATHOLOGY AND PRACTICE OF MEDICINE

Polypoid Growth of the Heart. (Reported by Mr. J. E. NIELD, Resident Medical Officer.)—Christopher M——, aged forty-seven, an Irishman, and a discharged soldier on pension; formerly served in India; was admitted as a home-patient of the Rochdale General Dispensary, May 5, 1852. I visited him the same day.

Symptoms.—Continuous vomiting of two days' duration, the egesta being streaked with blood; no pain, except during the act of emesis; tongue coated with a dense white fur; pulse rapid and very compressible; alvine functions normal. Ascertaining that a few days previously he had received his pension, and on the strength of it he had been indulging very freely in beer, I judged the case to be one of gastric derangement occasioned by this just-named excess. I sent the following mixture:—Epsom salts, two drachms; hydrocyanic acid, a drachm; camphor mixture, six ounces; half an ounce every three hours. I sent also a small dose of calomel and opium, to be taken when the vomiting should have subsided, as I believed it would.

May 6th.—On visiting the man to-day, I was for the first time informed that on the 3d instant, during his debauch, he became involved in a quarrel with another man, who, in the scuffle, kicked him over the region of the liver. On making pressure over this organ, there was some indication of tenderness, though not so considerable as to suggest serious lesion. There was no external evidence of injury. The vomiting still continued as incessant as before; the pulse was more labored; some dyspnœa had come on. There was no cough, nor other pulmonic symptom beyond the dyspnœa, to draw attention to the condition of the thoracic viscera. The face was much blanched, and the vital powers apparently fast waning, as if from internal hemorrhage. All the phenomena, in fact, pointed to the probability of rupture of the liver. I ordered the most perfect quietude to be observed, and sent a mixture containing small doses of opium. I visited him again in the evening; the pulse was fluttering; the respiration more oppressed; the vomiting persistent; the system merging on collapse. There was also some disturbance of the intellectual powers. I ordered bottles of hot water to the feet and to the epigastrium.

7th.—Nine A. M.: Pulse a mere thread; extremities cold; breathing much oppressed. He died an hour afterwards.

In connexion with Mr. J. E. Wood, one of the staff of this institution, and with his kind and valuable assistance, I made the necropsy, seven hours after death:—

No special external appearances, except a slight contusion on the arch of the nose. The thorax and abdomen being opened, the heart was first examined. The pericardium contained several ounces of serum; the heart itself was somewhat hypertrophied. On being removed from its attachments, a dense fibrinous mass was seen to hang from the severed pulmonary artery; the right ventricle being opened, this body was found to terminate in a lash of fibrinous threads, whose delicate extremities were rather firmly connected to the parietes of this cavity, and to the circumference of the auriculo-ventricular valve. In structure it was firm and elastic, nearly resembling tendon; and to complete the likeness, it was enveloped in a sort of theca, which was jagged and torn in places, as if it had been lately separated from its adhesions to the endocardium. Its length was ten inches; its weight 189 grains. At its superior extremity it was expanded into a leaf-like process. At about half its length, a process was sent off of some thickness. The walls of the ventricle were of more than normal thickness; the endocardium was hyperhæmatous; the valvular structures of the heart were natural; the pleuræ were almost throughout firmly adherent. The lungs were congested, but otherwise healthy. The liver was enlarged, but in structure healthy. *There was no solution of continuity whatever in any part of this viscus.* The stomach was to all appearance healthy, its mucous coat being, if anything, paler than usual; it contained several ounces of yellowish fluid, that had the odor of malt liquor. The rest of the abdominal organs were free from disease, with the exception of the kidneys, which were enlarged and mottled. The blood was remarkably fluid.

Remarks.—It is evident that the whole of the phenomena were dependent upon the adventitious formation within the heart. The peculiarity of the symptoms, however, and the fact of previous violence having been experienced, tended altegether to put diagnosis at fault. It cannot be doubted that the polypoid growth had occupied for some time the position in which it was found after death, but that its adhesions had prevented its exercising much influence on the circulating current. Its detachment may be accounted for in two ways—first, by the shock resulting from the blows and falls encountered during the fight—or second, (supposing the sickness to have been consequent on over-imbibition,) by the excessive retching accompanying the vomiting. Perhaps both contributed to this effect. I am less inclined to attribute the vomiting to sympathy with the condition of the heart, inasmuch as when first I visited the patient, I do not remember observing any pulmonic symptoms whatever.

The post-mortem examination was made in obedience to a coroner's order, and the man who had given the kick before spoken of had been placed in custody. I fully believed that the inspection would have disclosed a ruptured liver; and it seemed highly probable that the inquest would terminate in a verdict of manslaughter. The evidence given, however, being of course in accordance with the facts already detailed, the verdict was the usual one of "Died from natural causes."—*Lancet.*

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NOTICE TO CORRESPONDENTS.

Communications and Books for notice should be addressed to the Editors, care of Messrs. Lindsay & Blakiston.

Letters, &c., connected with the *business affairs* of the Journal should be addressed to the Publishers.

Papers for publication must be received *before* the 20th of the month, or they cannot appear in the forthcoming number.

The following Journals have been received in exchange:

American Journal of Medical Science. Jan., 1853.
Western Lancet. December.
New Orleans Monthly Medical Register.
Southern Journal of the Medical and Physical Sciences.
New Orleans Medical and Surgical Journal.
Medical Recorder.
Western Medico-Chirurgical Journal.
Union Journal of Medicine.
Medical News. Philadelphia.
Buffalo Journal.
New York Medical Gazette.
The Boston Medical and Surgical Journal. (Weekly.)
Stethoscope and Virginia Medical Gazette.
New Jersey Medical and Surgical Reporter.
Transylvania Medical Journal.
Southern Medical and Surgical Journal.
New Hampshire Journal of Medicine.
The London Lancet. (Weekly, London.)
The Medical Times and Gazette. (Weekly, London.)
Dublin Medical Press.
London Journal of Medicine.
Edinburgh Medical and Surgical Journal.
Journal of Psychological Medicine.
London Pharmaceutical Journal.
Edinburgh Monthly Journal.
Journal of Pharmacy.
North Western Medical Intelligencer.
American Journal of Insanity.

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BOOKS RECEIVED.

Ricord's Letters on Syphilis. From A. Hart, Esq.
Silliman's Chemistry. From Publishers.
Quekett's Lectures on Histology. From H. Bailliere, Esq.
Animal Chemistry, by Dr. Bence Jones. From the same.
Notes on Carpenter's Physiology, by Dr. Mackall.
What to observe in Medical Cases. From Blanchard & Lea.
Kirke and Paget's Physiology. Second American Edition. From the same.

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The foreign correspondents of the Examiner will please direct their Exchanges and other communications to the care of Mr. Thos. Delf, No. 21 Paternoster Row, London, or Mr. H. Bossange, 21 Bis, Quai Voltaire, Paris.

THE

MEDICAL EXAMINER,

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NEW SERIES.—NO. XCIX.—MARCH, 1853.

ORIGINAL COMMUNICATIONS.

Experimental Researches applied to Physiology and Pathology.

By E. BROWN-SÉQUARD, M. D., of Paris.

(Continued.)

XXII.—ON THE INCREASE OF ANIMAL HEAT AFTER INJURIES OF THE NERVOUS SYSTEM.

In another part of this series* I have endeavored to prove that the local increase of temperature following the section of the sympathetic nerve, is the result of paralysis of the blood-vessels. I will now relate some other cases in which a local increase of temperature takes place after various other injuries of the nervous system, and apparently in consequence of the same cause.

It was known, long ago, that an injury to the nervous system might be followed by a partial or even a general elevation of animal heat. Sir B. Brodie says,† Mr. Chossat has published an account of some experiments on animals, in which he found

* Medical Examiner, August 1853, p. 489.

† Medico-Chirurg. Transactions, 1837. Vol. xx., p. 132.

that the division of the superior portion of the spinal cord produced a remarkable evolution of animal heat, so that it was raised much above the natural standard. I have made experiments similar to those of Mr. Chossat, and have met with similar results. I have also seen several cases in which an accidental injury of the spinal cord has produced the same effect. The most remarkable of them was that of a man who was admitted into St. George's Hospital, in whom there was a forcible separation of the fifth and sixth cervical vertebræ, attended with an effusion of blood within the theca vertebralis, and laceration of the lower part of the cervical portion of the spinal cord. Respiration was performed by the diaphragm only, and, of course, in a very imperfect manner. The patient died at the end of twenty-two hours; and, for some time previous to his death, he breathed at very long intervals, the pulse being weak and the countenance livid. At last there were not more than five or six inspirations in a minute. Nevertheless, when the ball of a thermometer was placed between the scrotum and the thigh, the mercury rose to 111° of Fahrenheit's scale. Immediately after death, the temperature was examined in the same manner, and found to be still the same.

Brodie was mistaken as regards the experiments of Chossat. Instead of finding an increase in the animal heat after the section of the inferior portion of the spinal cord, Chossat found a considerable diminution in the temperature of dogs. But in two cases, where the spinal cord was divided at about the level of the last dorsal vertebra, in dogs, Chossat* found an increase in the animal heat. In one of these experiments, the increase was from 41°.1 to 41°.5 Cents., (105°.98 to 106°.7 Fahr.) In the other, the increase was from 41°.1 to 42°.9 Cs., (105°.98 to 109°.6.)

Dr. Macartney† found an increase in the temperature of parts paralyzed in consequence of the division of their nerve. H. Nasse,‡ who made many experiments on this subject, some-

Mèm. sur l'influence du syst. nerv. sur la chal. anim. Thèse de Paris. No. 126.—1820, p. 35. Exps. xxiii and xxiv.

† Treatise on Inflammation, 1838, p. 13.

‡ Vutersurchunger zur Physiol. und Pathol., 1839, v. ii., p. 190.

times observed an elevation in the temperature of the paralyzed parts after the division of the sciatic nerve, or after the partial destruction of the spinal cord.

In more than twenty experiments, I only once found an increase in the temperature of the leg of a guinea-pig, after the section of the sciatic nerve. This increase lasted about two or three days after the operation, and it was of two degrees Fahr.

After a complete transversal section of the spinal cord in the lumbar region, in birds and mammals, I found, repeatedly, an increase of one, two or three degrees Fahr. in the temperature of the paralyzed parts. I ascertained that it is not in consequence of an increase of the general temperature of the animal that such an increase exists. It is to be found only in the paralyzed parts.

I never found any increase of temperature after a complete transversal section of the spinal cord, either in the cervical or in the dorsal region.

After a section of a lateral half of the spinal cord, at the level of one of the three or four last dorsal vertebræ, I have almost constantly found an increase in the temperature of the posterior limb on the side of the section. The elevation varied from one to four degrees Fahr. On the contrary, there was a diminution of from one to five degrees Fahr. in the temperature of the other leg. In some cases, in consequence of the increase of temperature on one side and its diminution on the other side, I found a difference of six or seven degrees Fahr. in the temperature of the two limbs. It is very remarkable that, together with the increase of temperature in one limb, there is an augmentation of sensibility, and with the diminution of temperature in the other limb, there is also a diminution of sensibility.

Since the publication of the results of my experiments on the sympathetic nerve, I have performed them many other times, and I have found that the result is not so constant as Dr. A. Barnard and myself had admitted. In some rabbits there was no decided increase in the vascularization and in the temperature of the face. I ought to say that, in these cases, the two ears were already warm, and very vascular before the operation. I have found, also, that generally in very cold weather the ex-

tremity of the ear of rabbits, on the side of the section of the sympathetic nerve, remains cold.

From my experiments and from the observations and experiments of Brodie, Chossat, H. Nasse and Macartney, it results that the following opinion of Dr. Cl. Bernard is incorrect. He says: "It is known that injuries of the cerebro-spinal nervous system constantly produce a total or a partial diminution in the temperature of animals, either when a nerve has been divided or when the injury is made on the nervous centres."* He says also that an injury of the sympathetic nerve produces a very rapid increase of temperature; so that the sympathetic nerve and the cerebro-spinal nervous system are considered by Dr. Bernard as completely different, one from the other, as to the influence on animal heat when they are injured. The one should increase and the other diminish animal heat.

The truth is that these two effects—increase and diminution—may exist after an injury of either the sympathetic or the cerebro-spinal nervous system ;† and, in both cases, the increase may exist, at first, and be followed by a diminution.

Before pointing out the co-existence of certain facts with the increase or diminution of animal heat, I think it necessary to establish a distinction between the cases of increase of animal heat after injuries of the nervous system.

In some cases (as those related by Brodie) there has been an increase of temperature above the natural standard of animal heat. These are very extraordinary and very rare cases, and it is not my intention to attempt to explain them here. In the cases, the degree of temperature, although increased in some other paralyzed parts, has not been above the normal degree of blood heat. This is the only kind of increase of animal heat that I have observed, and this I will attempt to explain.

I have found that,—*ceteris paribus*,—the more the arteries and capillaries are dilated, the higher is the degree of temperature. This law is proved by the following facts:

1st. In all the cases of paralysis (from whatever cause) where I have found a diminution in the degree of temperature

*Gaz. Medic. de Paris, Vol. 7, No. 14, p. 227.

† Vide: Chossat, *loco cit.*, pp. 41-46.

of a paralyzed part, the arteries and capillaries were evidently much contracted.

2d. In the cases where the temperature was normal, the blood-vessels were of their natural size.

3d. In the cases where the temperature was increased, I have constantly found the arteries and capillaries enlarged.

4th. In some cases, I have found the same changes occurring in the temperature and in the blood-vessels. The temperature at first was greater than usual and the blood-vessels dilated; afterwards both the temperature and blood-vessels became natural; and, at last, the temperature becoming lower than usual, the size of the blood-vessels became smaller.

I need not say that the changes occurring in paralyzed parts in accordance with the size of the blood-vessels were the results of the differences in the amount of blood passing in these parts.

Now, it will be asked how, in certain cases of palsy, the size of the blood-vessels is larger than usual, and smaller in other cases. I cannot explain how it is so, but I can assert that it is a fact.

From the facts and reasonings related in this article, I draw the following conclusions:

1st. An injury of the nervous system may produce in the parts, which then become paralyzed, either an increase or diminution of temperature.

2d. The sympathetic nerve and the cerebro-spinal nervous system appear not to be different one from the other, in this respect.

3d. The degree of temperature of paralyzed parts depends on the quantity of blood they receive; and this quantity varies according to the size of the arteries and capillaries of these parts.

4th. It is a fact, hitherto unexplained, that the arterics and capillaries may be either dilated, normal, or contracted in paralyzed parts.

XXIII.—CAUSE OF THE STOPPING OF THE HEART'S MOVEMENTS, PRODUCED BY AN EXCITATION OF THE MEDULLA OBLONGATA OR THE PAR VAGUM.

E. H. and E. Weber have discovered a singular fact, hitherto

unexplained. When the par vagum or the medulla oblongata is excited by a powerful electro-magnetic current, in a living animal, the movements of the heart are suddenly stopped. This should be what is known for all motor nerves and muscles, if the cessation of the movements of the heart was the result of a permanent contraction. But the heart is not at all contracted, and, on the contrary, it remains perfectly placid.

This is entirely different from what we know to be the case for other muscles.

I have found that a violent mechanical excitation of the medulla oblongata produces also the same stopping of the heart's action.

Is the heart in a state of rest in consequence of a loss of its irritability or of an interruption of the excitation necessary to its action? The following fact proves that this second opinion is the right one. When the heart is stopped, every direct excitation upon it produces some beatings, and then, its irritability appears to be entire. The stopping, consequently, depends on the absence of excitation.

The cause exciting the heart to beat is in the blood contained in the capillaries of this organ, as I will try to prove in another article. Now, if we suppose that the galvanization of the par vagum produces a complete constriction of the capillaries of the heart, it is easy to understand why the heart is stopped: it is because the excitation cannot take place on account of the expulsion of the blood from the capillaries.

It will be asked on what ground we base the supposition that the capillaries are so contracted that they prevent entirely, or nearly so, the passage of the blood. I will answer:

1st. That it is known that a galvanization of certain nerves (and I have discovered that it is so with the capillaries of the face and ear when the sympathetic nerve is galvanized) may produce a considerable constriction of capillaries.

2d. That it is known that the nerves of the heart are distributed much more to its blood-vessels than to its muscular tissue.

3d. That, by our supposition, we place the fact of the stopping of the heart's movements among the well known facts, that an excitation of a molar nerve produces a contraction of the muscles to which it is distributed; and, therefore, we are not obliged to admit

that an excitation of a nerve is able to produce directly either a contraction of or the cessation of existing contractions.

There is a practical consequence to be drawn from the fact that in the case of an excitation of the medulla oblongata, the stopping of the heart is not produced by a loss of irritability of this organ.

Many cases of syncope are produced by a stopping of the heart's movements in consequence of the influence of an emotion on the medulla oblongata. In these cases it would be of very great importance to excite directly the beatings of the heart, either by compression of the chest or by an application of galvanism.

We ought to say that galvanism applied directly to the heart increases its beatings instead of diminishing them.

XXIV.—ON A SINGULAR DISTURBANCE IN THE VOLUNTARY MOVEMENTS, APPARENTLY PRODUCED BY AN ACTION OF ATMOSPHERIC AIR ON THE GRAY MATTER OF THE SPINAL CORD, IN BIRDS.

Some years ago I discovered that after the removal of a large quantity of the gray matter that exists in birds, on the posterior surface of the spinal cord, in the lumbar region, a great disturbance took place in the voluntary movements. I attributed this disturbance to the loss of gray matter. I have found, three or four months since, that the same disturbance existed in the voluntary movements after I had merely laid bare the gray matter, and immediately after it had been exposed to the action of air.

I am perfectly satisfied that it is not in consequence of a mechanical excitation of the spinal cord, accidentally produced during the operation of the removal of the bones and membranes, that this disorder takes place.

When the spinal cord is laid bare elsewhere than in the region of the lumbar enlargement—that is, in any place where the white substance covers completely the gray matter—there is no disturbance produced in the voluntary movements.

That disturbance very much resembles the so-called titubation which exists after either the removal of the cerebellum or the section of muscles of the posterior part of the neck. At each movement of progression, the animal tends to fall either

forwards, backwards, or laterally. It does not fall completely, but is obliged, in order to avoid falling, to make use of its wings, its tail and its beak.

(To be continued.)

On the Treatment of Tubercular Meningitis. By O. C. GIBBS, M. D., of Lake Co., Ohio.

The time was, and at no very distant date, when all diseases of the brain, occurring in children, accompanied with, or terminating in, an effusion of fluid into the ventricles of that organ, or between its investing membranes, were denominated Acute Hydrocephalus. And perhaps it would not be too much to say that diseases unaccompanied with that symptom, or without that termination, have been thus classified, irrespective of their pathological conditions.

Dr. Marshall Hall was perhaps the first who divided the so-called acute hydrocephalus into the true and spurious disease, established their non-identity, and proved the diversity of their pathology. The distinction drawn has ever since been practically recognized by the profession.

Recently another division has been made in the disease usually known as hydrocephalus. To whom the honor is due, is to me, immaterial. Dr. West says, "We are led to the conclusion that inflammation of the brain occurs in early life under two different conditions. It now and then comes on in previously healthy children, but occurs much oftener in connection with the tuberculous cachexia, or as the *result* of tubercular deposit in the brain or its membranes." (Lectures on Diseases of Children, p. 58.) But it would seem that he has failed to take practical advantage of the conclusion here expressed; for it appears to me that the occurrence of hydrocephalus in the robust and healthy must depend upon idiopathic meningeal or meningeo-cerebral inflammation; in the scrofulous cachexia the inflammatory action is caused by, and superadded to, the previously existing tubercular disposition. The inflammatory action is usually sthenic in the one case and asthenic in the other. Dr. West is by no means alone in his conclusion, though perhaps he has more distinctly stated it than another writer, whose opinions I have had an opportunity of examining. Dr. Watson says, "The grand predis-

posing cause of acute hydrocephalus is certainly the scrofulous diathesis, and this is why we see the complaint run so often in families; so that one child having died of that disease, affords much ground for apprehending that others, belonging to the same family, will become victims to it." Yet upon the same page he says: "I need not, I conceive, take any further pains to convince you that the disease is essentially inflammatory. We are inevitably led to that conclusion by the *symptoms*, which nearly resemble those that occur when undoubted inflammation has arisen from injuries of the head; by the *appearances on dissection*, which are *always* such as inflammation may have produced," &c. (Watson's Lectures, p. 270) Dr. Condie, and others, concur in the opinion expressed in the quotation from Dr. West. Condie says, "Subacute meningitis occurs chiefly in delicate, scrofulous children, especially in those distinguished by great irritability of the brain and nervous system." (Diseases of Children, p. 385.) Again, (p. 390,) he says, "A strong predisposition to the occurrence of chronic meningitis in the *tubercular form*, which, in children, is by far the most frequent, is manifestly hereditary or constitutional." Yet Dr. Condie, in my opinion, correctly denies the sweeping assertion of Dr. Watson, in reference to the post mortem appearances; for he says, "Traces of inflammation in the membranes or substance of the brain, or in other words increased vascularity, or thickening of the membranes, and pseudo-membranes, or purulent effusion, are by no means invariably detected in cases of chronic meningitis." (Diseases of Children, p. 390.) But admitting that the products of inflammation were always present in the brain or its membranes, in cases of death from tubercular meningitis, it certainly would not prove the disease to be essentially and primarily inflammatory; for who does not know, that in cases of death from phthisis, the lungs contain the products of inflammation as invariably as the membranes of the brain in tubercular meningitis. Dr. Simon says, "Tubercle, in itself, is clearly no product of inflammation, but is apt to act as an irritant of surrounding textures, and invite the addition of their inflammatory exudations." (Lectures on Pathology, p. 135.) Hence, we may conclude the disease under consideration to be essentially tubercular, and requiring, in part at least, remedies appropriate for the scrofulous diathesis.

If the above views be correct, it would seem apparent that the remedial means usually resorted to, bloodletting, purgatives, mercurials, &c., are not those best adapted to subdue the disease.

In the country the disease is not of very frequent occurrence. I have seen but four cases, in as many years of medical practice and observation. In these four, one only proved fatal, and in that case, convulsions, hemiplegia and loss of vision occurred before medical advice was taken.

In the three cases of recovery, *Iodide of Potassium* was the remedy depended upon.

The following case, condensed from my note book, is a fair sample of the cases alluded to, and well illustrates the beneficial effects of the iodine treatment.

August 11*th*, 1849. I was called to see a female child, aged 17 months. She was the fourth child of scrofulous parents; the two immediately preceding having died of hydrocephalus, at the ages respectively of 28 and 26 months. On the father's side, phthisis was a hereditary disease, on the mother's asthma and cancer. The child was decidedly scrofulous, and presented all the usual symptoms of chronic meningitis in a marked degree. The two preceding children had been treated by a very judicious practitioner; the treatment made use of is unknown to me, but bleeding from the temporal vein was the last resort.

I advised in this case tepid bathing daily; simple, easily digested, but nutritious articles of diet, (which last direction was not attended to,) and such articles as seemed best adapted to remove the derangement of the stomach and bowels to be temporarily resorted to, intermitted and resumed as circumstances might require. The following was ordered and persevered in, with one intermission of two weeks, for about four months.

℞ Iodid. of Potassium gr. xvj.
Sacch. alb. pur. ʒij.
Aquæ ℥ij.

Mix; dose, a teaspoonful once a day, morning.

After two weeks, the patient began slowly to improve, and is now, more than three years since, to all appearances, perfectly well.

In one case, six months after apparent recovery, I was compelled to return to the Iodide of Potassium, which again effected an improvement that has since been permanent.

These cases are, of course, too few to establish the remedial virtues of the Iodide of Potassium in tubercular meningitis; but, if this hastily penned article shall induce others, who have more experience with the disease than myself, to give the remedy a fair trial, and report the result, it will accomplish all I desire.

Perry, Lake Co., Ohio, February 1st, 1853.

Cases Illustrative of the successful employment of Oil of Turpentine, in Puerperal Tympanitis, &c. By JOSEPH SMITH, M. D., of Danville, Kentucky.

I submit the following cases to the profession, in which the oil of turpentine was advantageously employed in various puerperal affections, accompanied by tympanitis, and symptoms of incipient metritis, or peritonitis. I do not advance that the cases in question were the typhoid puerperal fever; and my object is simply to call attention to what I deem the undoubted value of the remedy in question, in various forms of abdominal disturbance after labor.

1. Mrs. H. was confined July 10th, 1850. The birth was premature, but there was nothing unusual in the labor. She seemed to be doing well, until the next day; when, on calling, I found her abdomen much enlarged, and very tender, and painful. The lochial discharge was not suppressed; the pulse not over 85; and the skin not hot. Believing the case one of simple tympanitis, I directed the oil of turpentine and castor oil, of each a teaspoonfull every four hours, with fomentations to the abdomen.

After some three or four doses had been taken, the swelling and pain were almost entirely dissipated. There were some partial relapses on the 13th and 14th, which were readily relieved by a dose or two of the same mixture. This combination caused one or two actions from the bowels, more laxative than purgative.

2. Mrs. S. was confined May 21st, 1852, with a natural labor. On the third morning, the 23d, she imprudently rose in bed, and exerted herself. She was taken immediately with a most violent chill, which lasted some two or three hours. Some three hours after the attack I saw her, and found her with hot skin, pulse 120, thirsty, womb very hard, and exceedingly tender and pain-

ful. Abdomen not swelled, excepting in the right groin, which was also very tender to the touch. Great restlessness and anxiety of countenance. Lochia and milk both present. This patient I knew from constitutional peculiarities could not use mercurials or opiates; and, as I thought her too weak to bear the lancet, I concluded to try the oil of turpentine. She was directed to take thirty drops of this medicine every two hours, with hot fomentations to the bowels. It was given in a spoonfull of buttermilk.

Being with the case pretty constantly, I was enabled to watch its course. From the second dose, there was evidently some relief of pain and heat, in eight hours there was a decided change, in twenty-four hours there was scarcely a vestige of pain or fever. From that time the turpentine was gradually withdrawn. No relapse.

3. A negro woman of Mr. S.'s was confined about the 25th of July last. Did not attend her. She was reported as doing very well, until August 3d, when I was called to see her. I found her complaining much of her abdomen; the womb was enlarged, hard and tender; pulse 95; tongue coated; skin dry and warm. She had been complaining several days; said the lochia had ceased the night before; some milk. Gave calomel and ipecac. pretty freely, and directed fomentations.

August 4th. Found her in much the same condition as on yesterday, only the abdomen more enlarged and painful; stomach still irritable; no milk. Directed fomentations, spirits turpentine 30 drops, with a teaspoonful of paregoric every two hours. This was continued until the 6th, when the stomach became so irritable that the turpentine was suspended. But there was evident and great relief of pain, swelling and fever. Mustard, &c., soon relieved the stomach, and the patient gradually improved until the 12th and 13th; she had a slight relapse, when the turpentine and paregoric was again given, with early relief. This patient took one or two mercurial potions during her attack.

4. Mrs. S—— was confined, Sept. 15th, 1852. First child, easy labor. On the 22d was taken with a severe chill, followed

by much pain in abdomen; the womb hard and painful, and strong bearing down sensations, almost like strong labor pains. Of this there has been a good deal since her confinement. Her skin hot and moist; pulse ranging from 120 to 130; thirsty; very restless. Directed spirits turpentine, 30 drops, laudanum, 20 drops, every three hours; fomentations. In twenty-four hours the fever, pain and swelling were almost entirely gone. The bearing down tenesmus in this case was very peculiar. It was present at intervals for ten days after labor, sometimes slight, at others very severe. I could not account for it. There was no smell in the lochia indicating the remains of the membranes, or a clot. Nor could I detect anything of the kind by the examination per vaginam. Five grains camphor, and one-eighth morphine were the only means that gave relief. Larger doses of morphine narcotized her too much.

5. Mrs. G—— was confined Dec. 2d, 1852. First labor; did not last an hour. Being absent, another physician was called; birth before he arrived; he removed the after-birth. Calling next day, I found her suffering much from after pains, and some excitement. Left portions of morphine to be used as occasion demanded.

4th. Found her worse; high fever; pulse 130; skin hot; abdomen swelled and painful; womb hard; right groin giving much pain on pressure; bowels confined. Directed senna to be used until free purgation; then to use oil of turpentine, 25 drops, and sulphate of morphia one-fourth grain every three hours.

5th. Found her much easier, less pain and swelling; pulse still frequent; continue turpen. and morph., with fomentations. Blue mass at night, x. grs. *6th.* Still some fever and pain; pulse 120; tongue coated; no operation; abdomen still enlarged, but not so tender. Omitted turpentine and morphia. Directed a purgative, and spirits nitre, and wine ipecac. every four hours; calomel, ipecac. and camphor pill at night. This case continued to alternate for some two weeks. The lochia continued, sometimes almost ceasing, and then too free. Secretion of milk ceased after the fifth day. The oil of turpentine was not used after the sixth day, excepting when there was much increase of the

pain of the womb, when a few doses almost invariably gave relief. The general treatment after this day was fomentations, warm hip bath, spirits nitre and ipecac., when there was fever. Laxatives.

Dec. 20. She was entirely convalescent.

6. Mrs. A——, confined February, 10, 1853. Tedious labor. Had pain in the side during labor. Twelfth morning was suddenly taken with severe pain in back; no fever. Camphor and turpentine on cotton applied to it, relieved the pain in the course of an hour. At noon the womb became very painful; skin hot; pulse 110; headache. Directed to take 30 drops spirits turpentine every two hours until relieved. She took three portions with entire relief of the womb.

Remarks.—The ages of these cases varied from eighteen to thirty-two. It will be seen that, in all of them but one, the turpentine was commenced early in the attack. The negro woman had been sick several days before she was seen. I am satisfied that this treatment will be successful as it is promptly used. If the remedy is delayed until the inflammation has advanced to structural lesion, it will have to be withdrawn, or, at any rate, combined with mercurials and alteratives with opium.

CLINICAL REPORTS.

Pennsylvania College, Ninth below Locust street. Service of Professor GILBERT.

Reported by W. H. GOBRECHT, M. D.

Jan. 22*d. Congenital Varus.*—Robert C——, (Case LXIII.) Dressings re-applied. A gaiter was ordered to be made upon the steel sole, to lace in front, and to have a good catch on the heel, so that it may be easily applied and effectually worn.

Spinal Irritation.—Robert C——, (Case LXVII.) This patient has greatly improved since the introduction of the seton, having had but two paroxysms, and those of a lighter character

than usual, since his last visit. There seems to be, however, some slight epileptic complication, and as Prof. Gilbert has found great benefit to result from the use of Veratria in nervous affections, especially in neuralgia, given until the production of tingling in the fingers and nausea, the Iodide of Potassium is discontinued, and the following prescription ordered:

℞ Veratriæ gr. ij.
Ft. in pil. No. xvi.
S. one thrice daily.

When the patient feels that a paroxysm is approaching, an additional pill is to be taken.

Feb. 5th. Has had no decided spasm since his last appearance, and but slight tremors twice only; he walks better, looks better and has now no headache. He is directed to take a Veratria pill *four* times, instead of thrice daily, and an additional pill if any premonitory tremors are noticed; but if much nausea results, the medicine should be suspended.

Strabismus.—James C——, (Case LXIX.) Some pain being set up in the eye after the operation, the patient was purged and cold water applied with relief.

The parallelism of the globes is perfect.

Case LXXIII. *Results of extensive injuries.*—James F——, aged 11 years, whilst flying a kite on a three storied house, during the last summer, fell to the pavement and incurred a dislocation of the right radius and ulna, backward, at the elbow-joint, with fracture of the coronoid process, also a compound fracture of the same bones below the joint, with anterior protrusion; there was a luxation of the left wrist backward, with compound fracture of radius and ulna near the elbow joint. In the consideration of the question of amputation, the almost utter helplessness of the patient which would follow the removal of both superior extremities, or if one only should be sacrificed, the serious impediment to success in the treatment of its stump from the condition of the other, determined an attempt to save both, which resulted thus: The right elbow is perfect, the radius is a very little impeded in rotation, and the length of the forearm undiminished. In regard to the left extremity, about an inch of the shaft of the radius was lost during treatment; there is partial rigidity of the fore and mid fingers, but good use of the thumb,

ring and little fingers, so that the patient can grasp with some facility, which doubtless will increase.

The treatment pursued after reduction and dressing the wounds, was by means of wooden splints padded with cotton. These were subsequently cut so as to afford access to the suppurating wounds, to which poultices were applied. Constitutional treatment of a rigidly antiphlogistic character became necessary during the first two weeks, after which there was no sympathetic fever.

Case LXXIV.—*Tumor on the Eye.*—Olivia C——, aged 49. Married. This tumor, about the size of a common white bean, is situated beneath the conjunctiva of the right eye, at the outer margin of the cornea, and in the antero-posterior axis of the globe; it seems to be firmly attached to the tissues beneath, and perhaps involves the cornea, which it partially overlies. Its appearance is that of a fibrous growth, although we may perhaps find it to be of a heterologous character. Its history is briefly this: When a child, the patient was struck and injured slightly in the spot now occupied by the tumor, with a stick, which caused no noticeable unpleasant result. About fifteen years since, the adventitious growth was first perceived, and gradually increased. Five years ago, Dr. Geo. M'Clellan removed it; the remaining ulcer cicatrized well, and nothing further was feared; however, it has recently reappeared, and for the last six months has grown more rapidly than at any previous time, causing, by its presence much irritation and frequent attacks of inflammation.

The patient is informed that its removal endangers the integrity of the eye, which may be pierced during the operation; besides which it may return, even if the procedure is successful. Nevertheless, if the tumor is allowed to remain, destruction of the organ is inevitable.

The patient being seated, a fine tenaculum was passed into the adventitious mass, but cut out at once; it was then shaved off by a sharp scalpel, and Nitrate of Silver applied to the cut surface.

The tumor is doubtless a fungous degeneration of a fibrous growth, having a deep-seated base, and we fear may eventually involve the entire eye, demanding its extirpation.

26th. Eye somewhat irritated, but no unpleasant symptoms. Nitrate of Silver reapplied.

Jan 29th. Case LXXV. *Amaurosis.*—Albion D. S——, sanguineous temperament, aged 29, oyster dredger, was seized, three weeks since, with pain in the temples, and glimmering of vision, which became at first lightly and then more densely foggy, until, although able to see light, he has become unable to distinguish objects, the left eye failing first. His appetite is good and bowels regular.

Loss of vision may result from several causes, as from cataract, an opacity of the crystalline lens; from glaucoma, a disease of the vitreous humor; or from amaurosis, an affection of the retina.

In this case however, the pupil is dilated and is of a natural color, hence neither cataract nor glaucoma exist; no acute symptoms have been present, indicating retinitis; and no general paralysis indicating nervous disease, is found; thus, doubtless, amaurosis has resulted from mere *congestion* of the vessels of the retina. Moreover, there is a little motion in the iris, which is not usually the case in confirmed amaurosis.

Venesection was ordered, the flow of blood to be continued almost to fainting. Then

℞. Hydrarg. chlo. mit. gr. x.,

to be followed in two hours with

Magnesiæ sulphat. ℥ss.
Sennæ ʒj.
Aq. bullient. f. ℥iv.

S. To be taken at one dose.

After the operation of the cathartic, to take the following:

℞. Hydr. chlo. mit. gr. xvi.
Potass. nitrat. ʒij.
Ant. et Potass. Tart. gr. ij.
M. ft. in chart No. xvi.
S. one thrice daily.

He was also directed to apply to the eye externally by saturated cloths:

℞. Plumbi Acetat. ʒj.
Aquæ fontis ℥viij.
M. ft. in lot.

Feb. 5th. As we see him to-day, vision has greatly improved in the left eye, but some iritis exists in the right, for which he is directed to renew the calomel, nitre and antimony, and take as before directed; besides which a seton is passed in the back of his neck as a powerful counter-irritant. Diet moderate, and occasional purging.

Case LXXVI.—*Cystic-sarcoma of the left testicle, congenital,* in Wm. Henry B——, aged 3 years. This tumor which existed at the birth of the child as above stated, has grown with his growth, but has not increased in size, relatively to the body. Its external appearance is well represented in the cut, (by Gihon, from a drawing by Mr. J. Wilson,) as extending from near the abdominal ring of the left side, very nearly to the knee, filling up the entire scrotum and drawing down the integument of the abdomen to such an extent as to obliterate any appearance of a penis, the extremity of the prepuce only being visible.

It corresponds very well to the description of tumors in this situation which occur in warm climates.

It is not hydrocele, since there is neither translucency nor fluctuation. It is not enterocele, since there is no well marked connexion with the abdominal ring, and it is too firm for such a tumor. It is not epiplocele, since it is not doughy and very unequal, but is quite elastic and hard.

The operation is entered into with the expectation of finding, either a fibrous tumor of the scrotum, or the testicle itself.

The removal was effected by the Surgeon, standing on the right, as follows: A single incision was made, commencing below the external abdominal ring of the left side, and carried along the side of the body and around the fundus of the mass to a corresponding point on the right side. A strong tenaculum was now placed in the tumor at its fundus in the line of the incision, and sufficient traction exerted by an assistant to ensure an easy dissection of the integument and fascia from its surface. This was readily accomplished, but upon arriving at its upper and posterior aspect, a distinct but delicate funicular connection with the external ring was noticed; about this cord, high up, a ligature was thrown, below which its vessels were cut at about an inch from the tumor, which was doubtless the left testicle.

The amount of hæmorrhage was unimportant. The abdominal integument retracted at once, and the form of the penis was re-developed; the scrotum became corrugated, and the cremaster muscle of the right testis was alternately retracted and relaxed, no such movements occurring upon the left side. The edges of the incision, (now very much diminished in length,) were brought together by four twisted sutures, and the scrotum supported by strips of adhesive plaster.

The case was taken charge of by Dr. Fussell of this city, who also assisted in the operation.

Feb. 2d. Symptoms of local inflammation, with symptomatic fever, were fully developed on the second day after the operation, requiring the application of ten leeches, and the internal exhibition of Hyd. Chlor. Mit., followed by Magnes. Sulph. Subsequently,

℞. Potass. Nitrat., ʒss.
Ant. et Potass. Tart. gr. i.
Aquæ font. fʒiv.
S. A tea spoonful every two hours.

This treatment reduced the local and general symptoms in a few days; since which they have entirely subsided.

The tumor, as here shown (in a cut by Gihon, from a drawing by Mr. J. Wilson,)

is 5⅞ inches in length. It is enclosed in a firm fibrous structure, which has a serous covering. Several vessels enter its upper and posterior aspect.

On dividing the mass longitudinally, it is found composed of tortuous crypts of variable size filled with a transparent glutinous fluid, separated by fibrous bands, dotted here and there with black; from one cyst larger than the rest at the lower angle, some apparently strumous flocculi were discharged. The tumor is, in all probability, a *cystic sarcoma* of the testis, which is rare, a very few such cases being reported. The cysts are enlargements of the tubuli semeniferi, quite analogous to the condition which exists in cystic sarcomata of the breast. The following is a microscopic analysis of its contents, by Prof. F. G. Smith, of this Institution:

Calcareous deposits in the tunica vaginalis testis.

Cholesterine and fat cells.

Pus globules and glandular tissue.

Melanotic cells.

Colloid matter, no cancer cells, but large inorganic globules, granulous matter.

We must conclude, therefore, that whilst there is no *positive* malignancy in this tumor, that it is proper to follow the case closely, and observe if there be any further developements.

CASE LXXVII. *Porrigo favosa.*—Christiana S——, aged 19 months. This is the most common form of scald head. It consists of favous pustules, resulting in scabs, and is contagious.

The scabs are circular and cup-shaped; they enlarge gradually, and multiply until a great part of, or the whole scalp, may become involved; the contiguous cup-shaped depressions presenting the appearance of a honey-comb, from which resemblance the affection has received a part of its name, *favosa.*

This case is one of moderate severity.

It was directed that the scalp should be well cleansed with soap and water, by means of a fine sponge, and that Tar ointment should be applied morning and evening.

The following was prescribed for internal use:

℞. Potassii Iodidi, gr. vi.
Iodinii, gr. iii.
Aquæ fontis, f℥i.

S. 15 drops thrice daily.

Feb. 2d. Sinus in Left Cheek.—Delia M——, (Case LXVI.) The inflammation and swelling seem here to continue unusually long, so that, in all probability, some portion of a decayed fang still remains. On examination of the jaw, such a fang was found, and removed.

CASE LXXVIII. *Contusion resulting in Abscess.*—Thomas C——, aged 40. This patient, whilst running, about two weeks since, fell upon a curb stone, severely bruising his right elbow and arm. This injury has resulted in an abscess on the outside

and back of the forearm, just below the elbow. Upon opening this abscess by a straight bistoury, in its most prominent part, as far from the joint as possible, pus of a strumous character was evacuated. Poultice ordered.

CASE LXXIX. *Cataract, left eye, formative stage.*—Mr. W——, aged 55. The sight of the left eye in this person began to fail some eight months back, since which time the obstruction to vision has gradually increased. At present he can see that persons are before him, although he cannot distinguish them. In cloudy weather his vision is by far the best, (this is one of the surest diagnostic marks of cataract.) The pupil is of normal size, and presents a nebulous appearance. No operation would be justifiable at present.

Ordered purgatives and moderate diet, with protection of the part from cold.

CASE LXXX. *Fracture of left clavicle.*—George McC——, aged 20. The fracture occurred seven weeks ago, just above the coracoid process of the scapula, and as no very great displacement results from such an injury at this point, the patient, unalarmed, did not apply for surgical aid until three weeks after the accident, when it seems that the ordinary treatment was pursued. The case is presented for the observation of the symptoms and results of this peculiar fracture. From the manner in which the clavicle is bound to the coracoid process, the fragments were but slightly displaced, and the patient, supposing a contusion only, was not startled until subsequent swelling came on from formation of callus. The injured clavicle is found, on measuring from the centre of the sternum to its acromial extremity, to be a half inch shorter than its fellow; the fractured ends do not perceptibly project upward, a mass of callus being found surrounding them.

Double Cataract. Margaret G——, (Case LXXII.)—In this case inflammation set in about 36 hours after the operation, for which she was bled from the arm to approaching syncope, after which a brisk purge was given, which operated well. The inflammation not yielding entirely, and becoming aggravated, on

the ensuing day twenty leeches were applied to the temporal region of the same side, and the following powders ordered:

℞. Hyd. chlor. Mit. gr. xvj.
Potass. Nitrat. ʒij.
Ant. et Potass. Tart. gr. ij.

M. ft. in chart. No. xvj. S. One every four hours. These were continued until slight constitutional effects were had. The case resulted in a perfect cure.

Case LXXXI. *Chronic Erythema.*—Charles M——, aged 65, a turner, always had good health, has chronic erythema of the dorsum of left foot and anterior part of leg, extending from the toes to just below the knee, with subcutaneous effusion.

The following ointment was ordered:

℞. Plumbi. Acetat. ʒij.
Cerat. Simp. ℥ij.

M. ft. ungt. S. To be applied on a cloth, evenly spread, and retained by a bandage from the toes up.

Case LXXXII. *Orchitis.*—Charles H——, aged 27. Has subacute inflammation of the right testis, arising from cold, he was ordered:

℞. Hydrarg. Chlo. Mit. gr. v.

To be followed in two hours by:

℞. Magnesiæ Sulphat. ʒj.

And adhesive strips were rather firmly applied to the affected testicle in the presence of the class, in the manner ordinarily directed.

BIBLIOGRAPHICAL NOTICES.

Report of the Pennsylvania Hospital for the Insane, for the year 1852. By Thomas S. Kirkbride, M. D., Physician to the Hospital.

Dr. Kirkbride's Twelfth Annual Report presents a most gratifying account of the noble Institution under his charge. "It closes its twelfth year," we learn, "in a state of high prosperity; its buildings about as extensive as are desirable, nearly every

room in all its wards constantly required to accommodate those who resort to it for relief, and its means of adding to the comfort and happiness of its patients, and carrying out a liberal course of treatment, steadily rising in character, and increasing in number and efficiency."

The most important improvement made in the Hospital, during the past year, is the introduction of *gas* for lighting the Hospital buildings. It is brought a distance of nearly two miles from the Philadelphia Gas Works; and its "convenience, cleanliness, safety, and economy" have been made so apparent, that Dr. Kirkbride views it as really indispensable in an Institution of the kind. And he considers it, besides, an important remedy:—

"The effect of cheerful, well-lighted halls and parlors is most striking upon every class of patients, as will readily be acknowledged by all who have watched their appearance or heard their remarks, where an improved mode of lighting has been introduced. There can be scarce anything more dreary about such establishments at night, than the appearance of their long halls so dimly lighted as barely to prevent persons running against each other, or parlors in which no one can read but in immediate proximity to the feeble lamp. When it is remembered, too, that the period during which this state of things exists, is often for at least six hours out of the sixteen that patients are out of bed, it may readily be understood how important it is to change all this gloom into cheerfulness, and to substitute a bountiful supply of gas-light for the obscurity commonly connected with ordinary lamps."

Institutions, distant from large cities, "can have the gas made on the premises, about as cheap as it can be ordinarily bought, and without difficulty, risk, or trouble of any kind."

Among the points to which Dr. Kirkbride particularly adverts in the Report before us, is the importance of a farm and garden as an appendage to an Hospital for the Insane.

"No new Institution, I feel quite confident," he says, "will hereafter be put up on less than one hundred acres, which amount seems to be indispensable to give the proper degree of privacy, to provide sufficient means of labor and of exercise, and to furnish the supplies that are required. It also seems well established that a wise foresight, sound views of the objects and real capabilities of Hospitals for the Insane, and true economy, should lead the older Institutions, less fortunately situated, at the earliest possible day, to dispose of their present establishments, and to provide new ones in more favorable locations. The experiment

of transferring a Hospital for the Insane from a city to the country, of substituting new for old buildings, and having more than a hundred instead of a few acres of land, was made by the Pennsylvania Hospital in 1841, and I presume no one will now be found to doubt the propriety of the course adopted, nor to raise the question, whether the results of that change, costly as it was, have not been such as to justify all the expense that was incurred."

Among the desirable improvements that have been lately added to the Institution, we notice with pleasure a *calisthenium*, intended to give the female patients the free use of calisthenic exercises. To free muscular exercise in the open air, Dr. Kirkbride attaches prominent importance as a therapeutic resource in the treatment of nervous disorders—quite as essential for the female as the male sex. "Muscles versus Nerves" is the motto which has been pleasantly adopted for the new calisthenium; and Dr. Kirkbride very aptly introduces the following strain of remarks "from an intelligent patient, in noticing this motto:"

"She very naturally inquired whether, if it was true that the use and development of the muscles kept down nervous irritability and removed nervous diseases, some very marked change had not come over the views of professional men and hospital practice, for that, in her early experience among the excited class, the grand object seemed to be to keep down and weaken the muscles, and let the nerves take care of themselves. Or else what could mean the varied and systematic modes of direct depletion, with the low diet, and, above all, the studied efforts to keep quiet these same muscles, either in a forced recumbent position, or worse, if upright, in that machine, whose title seems to have been framed in bitter irony of its real effects, the tranquillizing chair.' It seemed as though some grave surgical disease might be supposed to exist in every part of the body, which the slightest movements of the muscles would aggravate. The muscles of the tongue, however, were left at liberty, and full advantage was generally taken of this partial freedom, to give them, at least, abundant exercise, to the great annoyance of all in the vicinity. This criticism on that mode of treatment could hardly have been more pointed or more just. Much as it might reduce the muscular system, the experience of this, and of most other patients, would certainly be, that the reduction brought with it neither tranquillity to the house, comfort to the afflicted, nor composure to the disturbed mind."

We close this acceptable report, with the warmest feelings of gratification at the renewed evidence which it offers, of unceasing devotion to the physical comfort and therapeutic management of the insane.

On the Employment of Iodide of Potassium as a Remedy for the Affections caused by Lead and Mercury. By M. MELSENS. Translated by WILLIAM BUDD, M. D. [Published in the British and Foreign Medico-Chirurgical Review, for January, 1853.]

Dr. Budd, in his preface to M. Melsens' Memoir, very justly observes, that, "if as M. Melsens alleges, and as his numerous experiments seem conclusively to show, iodide of potassium is not only a safe, certain and radical cure for the common forms of saturnine and mercurial poisoning, but an equally sure preventive of the injurious effects so frequently produced by emanations from lead and mercury, the fact is one that cannot be made too widely known." And M. Melsens has attempted further to establish a relation between the iodide of potassium and mercury, as therapeutic agents, which is no less deserving of attention.

His starting point in reference to mercurial and saturnine poisoning is, that the metallic substance is in actual union with the affected part or parts, and is retained there in the form of some *insoluble* compound. "The iodide of potassium, after its absorption into the blood, combines with the metallic poison, and forms with it a new and *soluble* salt—liberates the poison from its union with the injured part—dissolves it out, so to speak, from the damaged fibre, and sets it once more afloat in the circulation." And the double iodide of mercury (or lead) and potassium is assumed to be eliminated through the kidneys almost as soon as formed, with any excess of iodide of potassium present.

The modus operandi of the antidote proposed here is apparently in antagonism with established views of antidotical action. In attacking a poison in the stomach, our purpose is to convert it from a soluble to an insoluble compound, with the aim of preventing its absorption into the circulation. But the object here is the reverse, to restore the poison to the current of the circulation, and cause its final elimination by uniting it with a substance readily cast out of the system.

It appears, from the experiments of M. Melsens, that the *kidneys* are the principal outlet for the iodide of potassium from the system; that, under ordinary circumstances, it is seldom or never traced in the fecal evacuations; and that even when associated with active purgatives, it is with extreme difficulty made to pass

through the bowels into the stools. So much for the channel of elimination. The essential chemical point in the eliminative process is the fact that all the mercurial and saturnine compounds which can possibly occur in the economy, are soluble in the iodide of potassium; the presence of the organic substances of the body not hindering these reactions. We quote at length M. Melsens' views and statements on these questions; and first as to mercury:

"It is well known that persons who have undergone mercurial treatment have observed, even after an interval of many years, that gold placed in contact with their perspiration has become coated with mercury, especially when excessive perspirations have been caused by the use of the vapor bath. If this fact be true, it proves that the system may absorb and retain mercury for a long time under forms which I will not try to define, but which very probably result from the insoluble compounds which the salts of mercury form, either with the organic or inorganic materials of the body, or with both conjoined. Perhaps the mercury may even occur in the metallic state, as some have admitted; at any rate, it is present in the body in such form as to be retained there. The principal combinations which might thus occur may be reduced to the following:

1. Combinations of corrosive sublimate, whether in its simple state, or as modified by the animal substances of the economy—namely,
   - *a.* With albumen.
   - *b.* Albumen, and the materials of the brain.
   - *c.* Gelatine.
   - *d.* The nitrogenous extractive matters of the blood, of muscle, of the urine, &c.
   - *e.* Albumen, fibrin, muscular fibre, pelatine, whether in the natural state or modified by digestion.
   - *f.* Matters of the bile.
2. Mercurial soaps.
3. Phosphates of mercury.
4. Mercury in the metallic state. (?)

All these compounds are soluble in alkaline or neutral pure iodide of potassium dissolved in one of the liquids of the body. I have made experiments with each of the compounds here enumerated, and have always succeeded in dissolving them under whatever circumstances. If the iodide of potassium be associated with a dilute acid which has no energetic action either on the solution of the salt or on the principles which occur in the body, the solution of the fixed mercurial compounds is still effected perfectly. In obtaining this last result I operated with lactic acid. After fixing corrosive sublimate on nervous filaments, muscular fibre, or on tendons, it is only necessary to wash them for a short time in a solution of iodide of potassium, whether acid, alkaline,

or neutral, in order to remove entirely the mercurial salt. It is especially with a solution of albumen and sublimate that these properties admit of being perfectly demonstrated; indeed, the experiment has been for many years a class experiment in M. Dumas' course at the School of Medicine. It is only necessary to pour a solution of iodide of potassium on the precipitate formed by albumen and sublimate, in order to see the liquid become instantly limpid. The iodide of mercury possesses a property which I must not omit to point out. This compound, as is well known, is soluble in caustic potash. Now, although caustic potash is not found in the living body, the alkalinity of the greater number of the greater of the fluids which are found there is worthy of being borne in mind, and acquires a certain degree of interest when viewed in relation to the following experiment. Mercury coarsely divided was placed under a layer of water holding in solution caustic potash and iodide of potassium. After some weeks' contact a considerable quantity of mercury was found dissolved in the liquid.

It is well known that metallic mercury in contact with alkaline chlorides in solution, itself passes in part to the state of chloride. It remained for me to prove that this reaction might occur in perfectly neutral or even in alkaline fluids. It was necessary in this experiment to guard against the intervention of the carbonic acid of the air, or of the acids sometimes diffused in the air of chemical laboratories. It appeared to me quite necessary to make this experiment, especially as it was possible that mercury might exist in the body in the metallic state, and yet act as a poison; in which case, the experiment I have just cited would still permit the hope that the poison might become dissolved by the action of the iodide of potassium, rendered alkaline by the fluids of the living body.

When metallic mercury is shaken in a solution of iodide of potassium, whether neutral or slightly acidulated with hydrochloric acid, the solution soon acquires an alkaline reaction—an incontestable proof that the oxygen of the air has laid hold of the potassium of the iodide, which, in its turn, has yielded its iodine to the mercury, the iodide of mercury thus formed having entered into combination with the iodide of potassium remaining in excess. It suffices to shake vigorously a neutral or slightly acidulated solution of iodide of potassium with an excess of mercury, for the space of a minute, in order to see the reaction occur. This might be easily done as a class-experiment, to show the tendency of the alkaline haloid salts to form double salts with the corresponding haloid salts of the metals properly so called. An analogous phenomenon may be observed, although less readily, with common salt, and, indeed, simple potash excites the oxidation of mercury, and dissolves small quantities of the oxide. When these experiments are made in closed vessels, it is easy to demonstrate the disappearance of oxygen, by analysing the air which has been operated on."

The solubility of the compounds of lead in iodide of potassium, is, it is admitted, of more difficult proof. On this point he says:

"I shall content myself with observing, therefore, that the iodide of lead is soluble in alkaline liquids, and that it has a marked tendency to combine with alkaline iodides. These facts have appeared to me to constitute adequate motives to induce medical men to employ the treatment by iodide of potassium for complaints which, however much they may be relieved, are, according to our best physicians, rarely, if ever, radically cured.

"I have proved that metallic lead becomes dissolved in a solution of iodide of potassium, rendered alkaline by potash. It is well known how rapidly certain metals become oxidized when exposed to moist air, in the presence of even feeble acids, like the carbonic acid of the atmosphere. This is the case with iron, and indeed with lead. The intervention of an alkali sometimes suffices to prevent oxidation. Such is the case with iron. Lead, copper, and zinc become oxidized, on the contrary, more rapidly in contact with an alkaline liquor. I have proved that granules of perfectly metallic lead, bathed by a solution of iodide of potassium, rendered alkaline by potash, become, after a time, partly dissolved in this mixture."

The legitimate sequitur of these chemical reactions is obviously increased activity of certain salts of mercury in the stomach, when followed by the administration of iodide of potassium. And this point seems to be made out both by reference to the statements and experiments of other chemists, and to M. Melsens' own researches with particular reference to the subject. And as a confirmatory fact, it is asserted that, in the treatment of secondary syphilis, "the administration of iodide of potassium often causes intense suffering in patients who have been treated by mercurials."

Analogous results are shown to have occurred after the administration of iodide of potassium to animals who have taken lead compounds—that is, aggravation of the poisonous phenomena. And, hence, it is urged that "great caution is necessary in the employment of this remedy in man, for the first few days." For, "at the moment when the metallic compounds fixed in the body become dissolved or transformed, phenomena of acute poisoning may occur, caused by their liberation."

Numerous cases are adduced of the successful application of this treatment to the relief of lead poisoning and mercurial poisoning. In fact, it is impossible to disbelieve in the remedial value of the agent, after perusing the mass of testimony by which it is attested. We confess, however, that plausible as is the theory of its action, we do not clearly understand the rapidly

succeeding activity and disappearance from the system which we are asked to admit in the combination of the poison and antidote.

A Discourse on the Times, Character and Writings of Hippocrates, read before the Trustees, Faculty, and Medical Class of the College of Physicians and Surgeons, at the opening of the term, 1852–53. By ELISHA BARTLETT, M. D., Professor of Materia Medica, &c. New York, 1852.

This elegant and instructive picture of the life and times of the Father of Medicine, will be read with general interest, and must take a place in our permanent medical literature.

The Physician's Pocket Dose and Symptom Book; containing the Doses and Uses of all the principal Articles of the Materia Medica and Chief Officinal Preparations, &c. &c. By JOSEPH H. WYTHES, M. D. Philadelphia, Lindsay & Blakiston: 1853. pp. 246.

This will be found an exceedingly convenient little pocket manual, especially useful to the young practitioner, in the emergencies which he so often encounters in the commencement of practice.

What to observe at the Bed-Side and after Death in Medical Cases. Published under the authority of the London Medical Society of Observation. Philadelphia: Blanchard and Lea. 1853.

This little book strikes us as meeting a want that has long been felt—in offering suggestions for uniformity and precision in the observation of disease. The form of arrangement of symptoms and after-death appearances, appears to have been originally framed by Dr. Walshe, and thrown into its present shape by a Committee of the London Medical Society of Observation, under the supervision of Dr. Ballard. These names are a guarantee for the thorough execution of the plan; and a rapid glance at the work has impressed us most favorably of the completeness with which it has been accomplished.

Introductory Lecture to the Course of Chemistry at the Jefferson Medical College. By FRANKLIN BACHE, M. D.

Introductory Lecture to the Course of Chemistry at the Pennsylvania Medical College. By JOHN J. REESE, M. D.

We have to acknowledge with pleasure the receipt of these very able and instructive introductories to the branch of Chemistry, in the institutions designated. Dr. Bache's eloquent discourse cannot fail to sustain his high reputation as a Chemist and Teacher; and Dr. Reese's maiden effort is an appropriate introduction to the successful course which, we learn, he has delivered.

THE MEDICAL EXAMINER.

PHILADELPHIA, MARCH, 1853.

THE SOUTHERN JOURNAL OF THE MEDICAL AND PHYSICAL SCIENCES.

This is the title of a new bi-monthly, published at Nashville, Tennessee, under the editorial charge of "Drs. Jno. W. King and Wm. P. Jones, in the department of Practical Medicine and Surgery; Dr. R. O. Currey, Chemistry and Pharmacy; and Dr. B. Wood. Dental Surgery." It promises to be a spirited and able addition to the rapidly growing ranks of the American Medical Press.

THE ESCULAPIAN: A MONTHLY MEDICAL PAPER FOR THE PEOPLE.

We very cordially commend this publication to general favor. Its objects are implied in the title, which we quote above; and they have been carried out, in the two numbers which have come under our notice, with marked discretion and ability. It is edited by D. C. Griswold, M. D., and published for the low subscription of one dollar a year.

LECTURES ON EXPERIMENTAL PHYSIOLOGY.

Dr. E. Brown-Séquard proposes to give a course of lectures on Experimental Physiology in this city, early in March. It will embrace

the Physiology of the Nervous System, with applications to Pathology. He will also give a course to students at the same time.

Both courses will be illustrated by vivisections.

Dr. Brown-Séquard's thorough acquaintance with this department of science, will ensure ample repayment to all who may attend upon his instructions and demonstrations.

MEDICAL NEWS.

THE NEW YORK MEDICAL GAZETTE appears in a new and improved dress, and is henceforward to be published monthly. It has taken a firm hold of the Profession.

THE BRITISH AND FOREIGN MEDICO-CHIRURGICAL REVIEW has adopted the plan of affixing the *names of reviewers* to many of the reviews which appear in that Journal. The Journal, it should, however, be borne in mind, is published without the usual responsibility of editorial names, and it is not intended "to lay aside altogether the incognito" in reviews.

At a meeting of the College of Physicians of Philadelphia, held February 2d, 1853, the following gentlemen were elected Delegates to the American Medical Association: Isaac Hays, George Fox, Henry Bond, W. S. W. Ruschenberger, G. Emerson, J. Rodman Paul, Chas. Evans, William Ashmead, John Bell, Ed. Hallowell, Alfred Stillé, Joseph Carson, R. La Roche, Ed. Hartshorne, Robert Bridges.

NORTHERN MEDICAL ASSOCIATION.—At a meeting of the Northern Medical Association, held January 6, 1853, the following members were elected officers for the present year:

President.—Dr. Benjamin S. Janney.

Vice-President.—Dr. N. L. Hatfield.

Counsellors.—Dr. Joseph R. Bryan, John F. Lamb, Isaac Remington, Wm. Mayburry, and John Uhler, Jr.

Secretary.—Dr. J. Henry Smaltz.

Corresponding Secretary.—Dr. Isaac Remington.

Reporting Secretaries.—Drs. John Rhein and C. P. Turner.

Delegates to the American Medical Association.—Drs. L. Curtis, B. S. Janney, N. L. Hatfield, J. F. Lamb, R. J. Levis, and Isaac Remington.

THE NAVAL MEDICAL EXAMINATION BOARD met at Philadelphia on the 15th of December, and has reported the following Assistant Surgeons as qualified for promotion: 1, Wm. Lowber; 2, P. J. Horwitz; 3, B. Rush Mitchell; 4, D. E. Phillips; 5, Jas. Hamilton; 6, J. L. Burtt. Thirty-four candidates for admission into the Navy as Assistant Surgeons, were examined, and the following nine were selected as the best qualified: 1, James H. Stuart, of Pennsylvania; 2, J. Pembroke Thorn, of Virginia; 3, John M. Browne, of New Hampshire; 4, John T. Taylor, of Delaware; 5, Henry Clay Caldwell, of Virginia; 6, Thomas J. Turner, of Pennsylvania; 7, William T. Hord, of Kentucky; 8, Wentworth R. Richardson, of Massachusetts; 9, A. Clarkson Smith, of Pennsylvania.

THE MEDICAL PROFESSION IN PARIS.—The Medical Directory of Paris, published by *L'Union Médicale*, gives the following numbers as to our Parisian brethren. Doctors of Medicine and of Surgery, 1337: officiers de santé (an inferior grade,) 179; pharmaciens, 423; midwives, 277. From the 1st of January, 1851, to 31st of December, 1852, there died in Paris 39 doctors of medicine; in the two previous years 64 had died. In the year just elapsed, 88 new practitioners set up in the capital. This year's list contains 15 medical men less than the last. The Directory also gives the numbers in the districts surrounding Paris, and from these statements it would appear that there is a great disproportion between doctors and patients. There are in fact less than 500 inhabitants for one medical man; and when it is considered how many of these apply to public institutions, very little is left for individual practitioners. *L'Union Médicale* warns young men from settling in Paris, as the exuberance of professional men is enormous.—*London Lancet.*

DEATH OF DR. GEORGE GREGORY.—This distinguished author and physician died after a severe illness, on Wednesday, the 25th of January last, in London. He was well known to the Profession and to the public as the Physician to the Small-pox and Vaccination Hospital, as a Lecturer on the Practice of Medicine at St. Thomas's Hospital, and as the author of treatises on the theory and practice of medicine, and on eruptive fevers, as well as of several papers which have from time to time appeared in the "Transactions" of the Royal Medical and Chirurgical Society, and in other journals. His first work has been so highly appreciated, that it has not only gone through six editions in this country, but has been most favorably received in the United States of

America, and in our East Indian territories, and is still used as the text-book of most of the Army medical officers.—*London Med. Times and Gaz.*, Jan. 29, 1853.

Death of Sir William Newbigging.—We have to record the death of this highly respected surgeon, which took place at his residence in Edinburgh, on the 23d of October last. Mr. Newbigging was born at Lanark in 1772; and, after pursuing his studies at Edinburgh, became a Fellow of the Royal College of Surgeons of Edinburgh in 1799.

Sir William was a Fellow of the Royal Society of Edinburgh, was formerly President of the College of Surgeons, and Vice-President of the Wernerian Society. The interest which he took in the cultivation and advancement of useful knowledge led him, when his retirement from practice left him more at leisure, to become a fellow of the Scottish Society of Arts when he was in his 77th year.—*London Journ. Med. Science.*

Obituary—Mr. Alexander Walker, the ingenious author of a work on the "Nervous System," and others on "Beauty," "Woman," "Intermarriage," &c., which displayed much original research, died at an advanced age at Leith, on Tuesday, December 7th.—*London Lancet.*

Death of Jonathan Pereira, M. D, F. R. S., &c. In all ages and in all conditions of society it has been customary, on the death of any distinguished individual, to commemorate the name of the deceased by recording the good deeds which in life rendered him illustrious. This has been done, not so much, perhaps, as a tribute of respect to the dead, as an incentive to the practice of virtue by the living; and surely there is no character which presents so many opportunities for useful comment and example as that which, amidst the difficulties of circumstances, has triumphed over obscurity, and risen into honorable fame. This was the case with the late Dr. Pereira, whose determination of purpose and untiring industry enabled him to accomplish more in the the space of one short life than is usually effected in that of many longer ones.

The subject of our present memoir was born in the parish of Shoreditch, in London, on the 22d of May, 1804. He received the rudiments of his education at some of the small schools in the neighborhood; and when he was about ten years of age he was placed under the tuition of a classical master of no ordinary attainments. This gentleman kept an academy at No. 10 Queen street, Finsbury, and Pereira remained with him for a period of four years, during which time he obtained the

friendship of his preceptor, who was accustomed to speak of him as a boy of considerable merit. When he left school he manifested a strong desire to enter the medical profession; and accordingly at the age of fifteen, or a little earlier, he was articled as an apprentice to Mr. Latham, an apothecary of the City-road. There he remained between two and three years, when his master became the subject of mental disease. This led to the breaking up of the practice and to the cancelling of Pereira's indentures. While he was with Mr. Latham he studied hard at his classics, and he drew a vocabulary of Latin terms for his guidance in dispensing.

At the close of the year 1821 he became a pupil at the General Dispensary in Aldersgate street, and he there attended the prelections of Dr. Clutterbuck on chemistry, materia medica, and practice of physic. He also availed himself of the lectures which were occasionally given by Dr. Birkbeck, on natural philosophy, and by Dr. Lambe, on botany. In the year following he entered to the surgical practice of Saint Bartholomew's Hospital. While thus engaged in the prosecution of his studies, a vacancy occurred in the office of apothecary at the Dispensary. This appointment he was anxious to secure for himself, but as he was not yet qualified for it, it was necessary that he should proceed at once to the hall, and obtain its license: this he did on the 6th of March, 1823, when he was only eighteen years of age. In the same month, he was appointed to the Dispensary, and we may date his illustrious career from that time. The salary at the Dispensary was not large—it was, in fact, only £120 per annum; and, with the view of increasing his income, he formed a class for private medical instruction. This he had but little difficulty in doing, as the lectures at the Dispensary were largely attended. His success in that undertaking was very great, and he thought it desirable to publish a few small books on the subjects in which he found his pupils most deficient. These were a translation of the "Pharmacopœia" for 1824, with the chemical decompositions; the "*Selecta è Prescriptis*;" a manual for the use of students; and a "General Table of Atomic Numbers, with an Introduction to the Atomic Theory." These works were published in the course of the years 1824–5, 6 and 7; they had a very extensive sale, and two of them are in existence at the present time.

In the year 1825 he passed the College of Surgeons, and in the year following he succeded Dr. Clutterbuck as a lecturer on chemistry. At that time he was only twenty-two years of age, but his appearance was commanding, and he therefore looked much older. His first lecture was given to a large class of pupils and friends. It was eminently successful, and he received the warm congratulations of his numerous admirers. Then, as ever afterwards, he sought to dazzle by the novelty of his facts and the profusion of his illustrations. His lecture-table was covered with specimens, and, among other things, he exhibited the new element, bromine, which Bolard, of Montpelier, had just then discovered.

In the course of a year or two after that time, he began to collect the

facts for his "Materia Medica." He saw that the whole subject of pharmacology was involved in the greatest confusion, that its principles were misapprehended, and that its doctrines were founded in absurdity and conjecture. From this chaos and darkness he determined to relieve it. Accordingly, he commenced a diligent search for all the facts of the science; he studied the ancient fathers of physic, and made himself master of the literature of the subject, from the earliest period of history; he collected the works of English writers, and he undertook the study of French and German, in order that he might read those of the Continent. At that time he devoted his whole energies to the subject, and worked for about sixteen hours a-day. He was accustomed to rise at six in the morning, and to read, with but little interruption, until twelve at night. This he continued to do for several years; and had he not been possessed of an iron constitution, of great physical endurance, and of a most determined purpose, he would unquestionably have sunk under it. As it was, the closeness of his application occasioned several slight attacks of epilepsy, and a frequent determination of blood to the head. After a short time he began to give lectures on materia medica, as well as on chemistry, at the Dispensary; and he must have been so completely engaged that he could not find leisure for original investigation. In fact, from the year 1827 until that of 1835, his name appears but once in the journals of the time. This occurred in 1829, when he published a short paper in the *London Medical and Physical Journal*, on the adulteration of hydriodate of potash.

In the year 1832 his affairs were in so prosperous a state that he ventured to leave the Dispensary, and to get married. He resigned his appointment in favor of his brother, and he commenced practice as a surgeon in Aldersgate street. A reference to THE LANCET of the time will show that he left the Dispensary about twelve months before the notorious quarrel occurred at that Institution. It is probable that he foersaw the approaching storm, and retired from the falling house; but be that as it may, he had, in the year of his marriage, joined the new medical school in Aldersgate street; and in the year following he was elected to the Chair of Chemistry in the London Hospital. For a period of six years he lectured at both of these places on three subjects —namely, on Chemistry, Botany and Materia Medica; and during the whole of each winter session he was accustomed to give two lectures daily. While he was at the Aldersgate Medical School he became very intimate with Dr. Cummin, who was then the editor of the late *Medical Gazette*; and in consequence of this and also of his great popularity as a teacher, he was engaged to publish his lectures on Materia Medica in that journal. They extended over a period of two years, viz., from 1835 to 1837, and amounted to seventy-four in number. There can be no doubt that they greatly added to his reputation; for we find that they were translated into the German, and re-published in India. In 1839, he re-produced them in another form—viz., in his "Elements of Materia Medica," and this work was so much appreciated

that the whole of the first part was bought up long before the second was ready for delivery. A second edition was therefore immediately called for, and it appeared in the year 1842. Before this date, however, viz. in 1839, he had been chosen Examiner in Materia Medica in the University of London; and in 1841 he had been elected Assistant-Physician to the London Hospital He took his degree at Erlangen, in 1840, and he obtained his license at the College of Physicians directly afterwards. About the same time he was invited by some of the authorities of St. Bartholomew's Hospital to lecture at the medical school of that Institution, and the arrangements for his so doing had been almost completed, for a syllabus of the course was actually published; but when it was notified to him that he would be required to give up his other appointments, he refused to relinquish his position at the London Hospital, at which institution he had experienced great kindness. He immediately afterwards, however, gave up the Aldersgate School.

In 1842, he gave two short courses of lectures at the rooms of the Pharmaceutical Society, and, in the year following, he was appointed its first professor. During that year he published his work on Food and Diet, and he was elected on the Council of the Royal Society. By that time, his practice as a physician had become rather extensive, and as it was rapidly increasing, he determined to throw aside his more scientific pursuits. Accordingly, in 1844, he resigned a part of the course of chemistry at the London Hospital into the hands of Dr. Letheby; in 1845 he gave up a larger portion of it; and in 1846 he relinquished it altogether. He continued, however, to lecture on Materia Medica at both the hospital and the Pharmaceutical Society, and there is no reason for believing that he contemplated any change in this matter until the new regulations of the Apothecaries' Society transferred his course to the summer session. This arrangement interfered with his usual habits, and also with his ideas of the importance of the subject, and consequently, in 1850, he resigned his lectureship at the hospital, though he still continued to deliver a winter course at the Pharmaceutical Society. In 1845, he was elected a fellow of the College, and, in 1851, he became a full physician at the hospital. He had now reached the summit of his ambition: his reputation as an author was established, and the rewards of industry were falling thick about him. He was a fellow of many scientific societies, he was in constant communication with the learned of all countries, he was intimately connected with many of the greatest institutions of the metropolis, and was, in fact, their brightest ornament; he had collected around him a large circle of friends and admirers, and he saw before him the prospect of wealth and happiness. In the midst of all this, however, he was stricken down, and that so suddenly, that he had hardly time to take leave of those who were about him. He died on the 20th of January last, and within one week of health and hope he was placed in his last resting place. His funeral took place at Kensal-green on the Thursday following, in the presence of a large number of friends and pupils, who mourned in silent grief.

A retrospect of the labors of this distinguished physician will show that he was a man of no ordinary capacity, that he was characterized by qualities which always ensure success. He had an unquenchable thirst for knowledge, an indefatigable spirit, unbounded industry, and a determination of purpose that was irresistible. Whatsoever he did he did well, and he therefore made his performances as valuable to others as they were creditable to himself. This is evidenced by the works to which we have alluded, for they have made for him the reputation which he possessed, and have given to others the means of acquiring knowledge which is not to be found elsewhere. The great peculiarity of his efforts is, that he aimed more at bringing within our reach the treasures of other men's minds than of exposing those of his own. He has, indeed, been charged with a want of originality, and, most certainly, if we estimate him by the value of his own independent researches, he is open to such a charge; but it must also be admitted that it is an equally useful element of the human mind, that faculty which urges men to gather up the scattered facts of science, and to mould them into a shape that may be made available to all. This has our author accomplished, and the result of his labors will endure beyond the efforts of originality, for they will last through all time, as a monument of his industry.—*London Lancet*, Feb. 1853.

Death from the administration of chloroform.—A person named Henry Hollingworth, a factory operative from Newton-moor, near Hyde, has fallen a victim, at the Manchester Royal Infirmary, to the use of chloroform, administered to nullify the pain consequent upon a severe operation. An inquest was held on view of the body by Mr. Herford, coroner for the borough, when the following evidence was given:

Mr. John Wright Baker, house-surgeon at the Royal Infirmary, said the deceased was admitted on the 16th Dec., on account of a malignant tumor on the right thigh, to remove which an operation was performed, as it was looked upon as a cancerous tumor, though enveloped in much doubt, as those tumors often are. He was in a bad state of health when admitted, and everything was done to improve his health previous to the operation. A consultation, as I understood, had been held previous to his admission, and it had then been determined that the operation should be performed, of course with the consent of the patient. The consultation was of all the medical men of the infirmary. The deceased, the day before the operation, said he was ready for it, but wished to have chloroform. Almost every patient takes it. I said he should have it if he wished it, and that he would feel no pain, and that I would do all I could to support his strenth. I did not give him any caution. We have given chloroform frequently, and never had a fatal case before. At

eleven o'clock on Friday, the 24th Dec., the operation took place. There were present Mr. Jordan, as the operator, Mr. Beever, as his assistant in the operation, Mr. Wilson, Dr. Renaud, and Dr. Wilkinson (all members of the honorary medical staff of the infirmary,) and myself. Mr. Frederick Heath, a qualified surgeon, administered the chloroform. The man was very much excited, struggled, and talked fast. The chloroform was administered slowly, and every precaution was taken to prevent any danger; and the medical men remarked two or three times how very long it was in taking effect. He at last became insensible in about seven minutes at least. Mr. Jordan commenced the operation by an incision into the skin covering the tumor. I was assisting the surgeon when Mr. Heath directed my attention to the patient's face. This was about five minutes after the operation had commenced. I then observed congestion about the face, but there was no stertorous breathing. His pupils appeared almost to have ceased to act. His breathing was become exceedingly slow, and he seemed to be sinking fast. I directed the attention of the operator and other medical men to these symptoms. The operation was then suspended, and means resorted to for restoring animation, but the pupils had ceased to act, and had become fixed almost immediately. He gave one strong gasp, and then to all appearance was dead. In administering the chloroform, successive doses were given until it took effect. Every dose consisted of a drachm, taken at intervals in an inhaler. Constitutions differ with regard to the effect produced by chloroform, but we use every precaution to prevent injury; and I am satisfied that the surgeons did their duty in the administration of the chloroform and in the operation.

Mr. Jordan was examined, and stated, in corroboration of Mr. Baker's evidence, that more time elapsed than usual before insensibility was produced, and then it was not complete, for after the incision was made, the man, more than once, said a cat was scratching him. Chloroform was generally administered in cases of operation, unless there were circumstances which, in the opinion of the surgeons, rendered it undesirable. Mr. Heath was a competent person to administer chloroform. The post-mortem examination showed that asphyxia, caused by chloroform, produced the death. There was a congestion both of the brain and lungs.

Verdict—"Died from the effects of chloroform."

It is, we understand, the determination of the medical staff in all cases requiring the use of this deadly though valuable agent, to have one person to administer it, and another to scrutinize the effects upon the patients, in order to avoid a second fatality of the kind.—*London Lancet.*

THE FOUNDER OF THE BRITISH MUSEUM.—Sir Hans Sloane was born, according to some documents in the library of his splendid collection at the British Museum, in the County Down, Ireland, at a place called Killeagh, April 16, 1660. He stated in his will that the collection he was bequeathing the nation was richly worth £80,000. It contained 200 volumes of dried plants in the form of a *hortus siccus*, 30,000 mineral and other specimens of great interest in natural history, with a library of 50,000 volumes, and 3566 very rare manuscripts. There are two pictures of this great and talented Irishman in the Museum. One would like to see them more generally known. It appears, from the little written of Sir Hans Sloane, that it was in Ulster, in Ireland, he first imbibed that love of scientific pursuits that has since rendered his name, and we fear only his name, illustrious: in France and Ireland, in fact, was laid the foundation of his great museum. Like Hunter, Mozart, Goldsmith, Haydn, Johnson, and a legion of other great men, we find Sloane in early years struggling a good deal with adversity. Before he was of age he had several severe attacks of hæmoptysis, which threatened him with an early grave, like Laennec, Bichât and others; death, however, spared him till he had done his work. Stahl, Ray, and another great countryman, Robert Boyle, were then in the ascendant, all of whom were known to Sloane, and helped to form his mind. And yet who thinks, amid the winged bulls from Nineveh, and the magnificent collection crowded at present in the huge building of the British Museum, of Sir Hans Sloane or Boyle. We think of Watt whenever we see a steam engine, because with one happy thought he has made it the last wonder of the world in a utilitarian point of view; the great workers in the mine of abstract science and philosophy we disregard. In 1683, young Sloane set off for France, and there seems to have been delighted with the botanical collections and lectures of Tournefort, and spent a year collecting plants for the museum. We find him next going out to the West Indies, a young man, under 30, physician to the Duke of Albemarle, and in spite of many crosses and disappointments, still further adding to his specimens 800 species of rare and valuable tropical plants. These two collections form the first nucleus of the British Museum. It seems all this time he never forgot his native country, Ireland, and we should in all probability have those specimens now in Trinity College, Dublin, and the British Museum (which would be a great blessing) quite a different institution, but that Sloane got married to a very rich wife, and settled permanently in London. In 1693, he became Secretary of the Royal Society, and in 1727, was appointed physician to the king, and succeeded the great Newton as

president of the Royal Society. George I. made him a baronet, and he died, at the age of 93, in 1753.—*Dublin Medical Press.*

Five Cases of Persons struck by Lightning. — In five men who suffered from this accident, M. Minourid observed burns presenting black eschars, with destruction of the epidermis, rete mucosum, and of a part or the entire thickness of the dermis, covered with a dark-colored phlyctenæ, surrounded by an erythematous redness; the eschars were large, irregular, ill-circumscribed, oval, or round, separated from each other by spaces of inflamed skin; no part of the body escaped, but they were particularly well marked on the outside of the lower extremities. It is remarkable that nowhere did the burn extend deeper than the dermis (the burn of the fourth degree of Dupuytren.) Would it appear, then, that the subcutaneous cellular tissue is a non-conductor of electricity? Of ordinary burns, those which most resemble the effects of lightning are caused by gunpowder explosions; but the latter differ essentially, by bearing the marks of the grains of powder in the skin. In one of these men who died instantly, the writer observed that, though it was then the month of December, and the body had been left during the night merely covered with a cloth, and exposed to the air, yet after a period of thirteen hours, it was yet warm.—*Annali Universali di Medicina.*

RECORD OF MEDICAL SCIENCE.

CHEMISTRY.

On Some of the more Important Chemical Disinfectants. By George Wilson, M. D., F. R. S. E., Hon. Member of the Pharmaceutical Society of Great Britain.—I consider it an acknowledgment due from me to the Pharmaceutical Society of Great Britain, which has honored me with its diploma, that I should contribute a paper to the proceedings of its Edinburgh section, with which I stand more immediately connected. I have selected a subject, of special interest at the present moment, when we have reason to apprehend the appearance of cholera on our shores, but which is at all times a subject not less important than it is difficult. To discuss the entire question of disinfection would require many papers. I can only refer at present to some of its relations.

The term *disinfectant*, in strictness of language, can only be applied to those agents or substances which destroy or decompose infectious or contagious matter. But it is usually employed in a wider sense, so as to include, not only *disinfectants proper*, but likewise *antiseptics* and

deodorisers. Any attempt to draw a sharp line of demarcation between these three classes of agents, is rendered impossible by our almost total ignorance of the nature of contagious matter. Some substances, such as chlorine and sulphurous acid, possess at the same time, disinfectant, antiseptic, and deodorising powers. Some, like common salt, are probably simply antiseptic; of others, such as the salts of the heavy metals, which are in high repute as deodorisers, it may be questioned whether they are of any value as disinfectants, although with some persons they rank at the head of the list. Without insisting at present on this, it may suffice to define the bodies we are about to consider, thus: A disinfectant is an agent which effects the chemical decomposition of organic poisonous matter—the term poisonous being used in a wide sense to include all the known or supposed causes of the development of disease, which are referred to under the names of miasma, malaria, infectious virus, contagious matter, &c.

An antiseptic is an agent which prevents or arrests the development of organic poisonous (or non-poisonous matter) without effecting its chemical decomposition.

A deodoriser is a substance which destroys odor, by decomposing or combining with, or absorbing odorous matter. Chlorine, for example, decomposes sulphuretted hydrogen, whilst a salt of lead combines with it, and charcoal simply absorbs it.

Before considering the relative merits of particular substances belonging to these classes, it is necessary, however, briefly to discuss the important question—does the poisonous organic matter which occasions certain diseases, occur in the solid, liquid, or gaseous form? The certainty that prolonged exposure to a vitiated atmosphere, such, for example, as that of a fever ward, produces disease, has led to a conclusion in which probably all concur, that the air is one of the chief media through which disease is propagated, and this connexion has in turn led to the much more doubtful inference that infectious matter is truly gaseous or vaporous. This view has probably been strengthened by the recent extensive study of the properties of anæsthetics, and by the many observations which have been made on the rapid and powerful action on the body of substances which enter it through the lungs. It has certainly also been deepened by the opinion, widely prevalent, that the gases which are evolved from cesspools, sewers, and stagnant waters in general, particularly sulphuretted hydrogen, hydrosulphuret of ammonia, and marsh gas (light carburetted hydrogen) are the *direct* and *specific* causes of ague and fever.

If this opinion were well founded, the limits and best modes of applying disinfectants could be determined without much difficulty, and our control over infectious diseases would certainly be much greater than it is.

I think, however, that we may with confidence affirm that the great majority of diseases are not propagated by gaseous poisons. The recent tendency to advocate an opposite opinion, has been mainly occasioned, I believe, by an opinion expressed by the late Professor Daniell to the effect, that the fatal fever of the African coast is occasioned by sulphuret-

ted hydrogen. This view was founded on an analysis of water brought from that coast, and determined the ventilating arrangements fitted up in the vessels which formed the disastrous Niger Expedition. It appears to have been extensively adopted by medical men.

During the frequent prosecutions for nuisance, under the new police act, which took place in this city and elsewhere, during the last visitation of cholera, it occurred to me, and to other chemists, to be constantly met by endeavours on the part of the prosecutor to compel an acknowledgment that sulphuretted hydrogen, hydrosulphuret of ammonia, and marsh gas or light carburetted hydrogen, which are confessedly given off by sewage waters, are the *direct* causes of fevers and other diseases. So long as this idea prevails, and men rest satisfied with it, as the true explanation of the mode in which fevers and similar maladies originate and are disseminated, they will cease to prosecute inquiry into the matter. It is most important, therefore, to discountenance the notion that we are acquainted with the true *materies morbi*.

That neither sulphuretted hydrogen nor hydrosulphuret of ammonia produces any special disease, may be sufficiently demonstrated by the impunity with which persons are known to expose themselves to much larger quantities of these gases than can possibly act on those who suffer from exposure to marsh miasmata. In these, the nicest tests have failed to give the slightest indications of sulphuretted hydrogen, and yet a few hours exposure to such miasms has been enough to develop fever. On the other hand, in every analytical laboratory, sulphuretted hydrogen and hydrosulphuret of ammonia are daily respired for weeks or months together by those engaged in analysis, yet analytical chemists certainly are not specially subject to fevers. At the Bonnington Chemical Works, where the ammoniacal liquor from the Edinburgh Gas Works is largely converted into sulphate and muriate of ammonia, the workmen are exposed to the hydrosulphuret of ammonia, which forms so considerable a part of the liquor, and when it is neutralized with sulphuric and muriatic acid, sulphuretted hydrogen is given off in such abundance as to blacken the silver coins and watches on the persons of the bystanders, and even (along with the carbonic acid simultaneously evolved) to render them temporarily insensible if they incautiously respire the gases. Yet no special malady is known to result from this exposure, and the Bonnington Works enjoy the reputation in the neighborhood of protecting it from the inroads of endemic and epidemic diseases. Similar observations as to the non-deleterious effects of exposure to comparatively large volumes of sulphuretted hydrogen have been made at the metal works, where a superficial tarnish of metallic sulphuret is removed by washing with acids, and the workmen are freely exposed to the sulphuretted hydrogen evolved. I need not say, that I do not wish to affirm that this gas or its combination with ammonia, is not a powerful poison, if respired alone, or to deny that the continued entrance of either into the body, must debilitate it and prepare it for yielding to the attacks of disease. But that it is the cause of the fevers, which a very short exposure to the so-called malaria of certain districts infallibly occasions, I altogether disbelieve.

The alleged noxiousness of diluted marsh gas (light carburetted hydrogen), admits of more easy disproof, for were it the deadly agent it has been declared to be, our colliers, who are exposed in coal pits to much larger volumes of it than any other class of persons, should be to a corresponding extent sufferers from the diseases which it is supposed to occasion; but, unless when its mixture with air explodes, it is destitute of any injurious action on the pitmen, who are a healthy class of the community.

Another disease—namely, influenza—has been imputed by high chemical authorities to the diffusion through the atmosphere of a peculiar gas; Dr. Prout regarding seleniuretted hydrogen as its cause, Schönbein attributing its production to ozone. There is no evidence that either of these views is true, but much may be said in favor of the latter. The last severe epidemic of influenza spread over Europe with a rapidity which almost seems to point to a gas as the medium of its propagation. No one, however, has detected seleniuretted hydrogen in the atmosphere; and air largely impregnated with ozone may be breathed with an impunity which throws grave difficulties in the way of Schönbein's hypothesis.

Whilst thus, with the exception of influenza (if it is be excepted,) no gas is known to possess the power of developing an infectious or contagious endemic or epidemic; on the other hand, as Professor Graham has justly remarked, such infectious matters as are accessible to us, for example, "the matter of cow-pox, may be dried in the air, and is not in the least degree volatile. Indeed, the volatility of a body implies a certain simplicity of constitution and limit to the number of atoms in its integrant particles, which true organic bodies appear not to possess. Again, the source of such bodies being at all times inconsiderable, they would, if vapors, be liable to a speedy attenuation by diffusion so great as to render their action wholly inconceivable. It is more probable that matters of contagion are highly-organized particles of fixed matter, which may find its way into the atmosphere, notwithstanding, like the pollen of flowers, and remain for a time suspended in it."

To these statements it may be added, that all chemists now acknowledge that volatility is not essential to the transference of solid bodies to the atmosphere, at least so far as those soluble in water are concerned; for observations on the largest scale have shown that the vapors of volatile liquids carry with them sensible quantities of all the solids which they dissolve; common salt, nitrate of potass, boracic acid, phosphoric acid, afford marked examples of this; but the list of salts soluble in water which accompany its vapor at temperatures at which when dry they are fixed, is endless.* The significant word "*Malaria*," therefore,

* In virtue of this we may anticipate the administration of other medicines than anæsthetics by the lungs, although they may not be volatile. In cases of poisoning it would be of the greatest importance, if we could directly transfer to the blood an emetic or purgative, which we may hope to do along with the vapor of its solvent, aqueous or non-aqueous. Such a process, however, would be applicable only to medicines which act powerfully in small doses.

which embodies in a single term the evil reputation which the air or atmosphere has acquired, as the vehicle of contagion, may still, if we choose, be retained, although we acknowledge that all accessible contagious matters are non-volatile liquids or solids. It may further be added, that with the questionable exception of influenza, no endemic or epidemic spreads with the rapidity and equability, so far as area of occurrence is concerned, which would characterize it, if it were occasioned by a gas subject to a force so powerful as that of gaseous diffusion. Professor Graham's argument is still more cogent, for, according to his views, if infectious matters were truly gaseous, we should never have endemics or epidemics, unless those matters were developed in immensely larger quantities than by universal acknowledgment they are. In truth, they elude every test, even when applied to large volumes of the most infected atmospheres.

From all that has been stated, it must be inferred, according to our present knowledge, that at least the great majority of the substances which are intended to be reached by disinfectants, are not volatile, and therefore are much less easily decomposed than if they were gases. We may also with reasonable confidence affirm, that they are organic products, and as such consist of carbon, hydrogen, oxygen, and nitrogen, or at least of two (if not always of three) of these elements; and that, like all such compounds, they are readily decomposed by chemical reagents, especially oxidizing ones. There is no reason to imagine that infectious matters are difficult to decompose, *provided we can reach them*. The difficulty lies in reaching them. Assuming then that contagious matters are not volatile, and that they contain (to take the most complex case) carbon, hydrogen, oxygen, and nitrogen, the principles which are to guide us in the application of chemical disinfectants, will not be far to seek. Oxidizing agents will plainly be of great value as they can readily convert hydrogen into water, and carbon into carbonic acid, and thus disintegrate and destroy the morbific matter. Substances having a great affinity for hydrogen, such as chlorine and its class, will plainly also be of great service. Substances having an affinity for oxygen will also be applicable to the destruction of organic poisons; and, finally, all reagents which by contact with organic matter can determine a new arrangement of its ultimate elements. All the powerful chemical disinfectants act in one or other or all of those ways. I shall refer to five of the disinfectants: 1, quicklime, including caustic potash and soda; 2, nitric acid; 3, chlorine; 4, aqua regia; 5, ozone. The value of *quicklime* and of the *caustic alkalies* as disinfectants, has certainly not been overrated, although it may be questioned whether our sanitary authorities have been wise in trusting to lime alone as a purifier. From the careful study of the process of natural and artificial nitrification, and from the results of the application of soda lime in organic analysis, we have learned that the caustic alkalies and alkaline earths decompose organic matter with the evolution of ammonia, which by oxidization may become converted into nitric acid. Woodwork or stone floors, to which a coating of limewash cannot be applied, requires only to be

washed with caustic soda or soft soap, to obtain an effect identical with that which lime occasions.

2. *Nitric Acid* seems latterly to have fallen into disrepute, but certainly undeservedly. It acts more rapidly on many organic compounds than chlorine does, attacking their carbon as well as their hydrogen, and as it is not required in large quantity its application is not costly.

3. *Chlorine.*—Of chlorine, which is at present the favorite disinfectant, it is needless to speak. Its peculiar power of decomposing combinations of hydrogen, gives it, in one respect, a superiority over nitric acid, which does not decompose many of the gaseous hydro-carbons; but it should not be forgotten that it is only in the presence of light that this action of chlorine is fully displayed, so that its disinfectant influence is comparatively small in the case of dark or ill-lighted apartments, such as underground cellars, the lower cabins, or the hold of a ship, which are the very places where disinfectants are often most wanted

4. *Aqua Regia*, as uniting the properties of nitric acid and of chlorine; each of which has peculiar virtues, the former in particular being a wonderful oxidizing agent, the latter possessed of a great decomposing action over hydro-carbons, appears entitled to a high place among disinfectants. It can be cheaply procured by pouring oil of vitrol on a mixture of nitric acid and common salt, or by heating a mixture of nitric and muriatic acids.

One of the most rapid and effectual methods of disinfecting a large empty apartment, such as an hospital ward, would be to place in one corner a vessel containing the materials for chlorine, such as oxide of manganese and hydrochloric acid, or oxide of manganese, common salt, and oil of vitrol; and in another corner a vessel containing nitric acid and a few fragments of copper, so as to evolve nitric oxide, which would spread through the apartment and form nitrous acid there, oxidizing everything oxidizable which it contained, whilst the chlorine specially attacked the hydro-genous compounds. The walls might then, if necessary, be lime-washed, with a view alike to destroy any adhering organic matter which had resisted the action of the gases, and to neutralise any traces of free acid.

5. The last of the disinfectants proper to which I refer is the singular substance ozone, which has a special interest, as being in all probability the great natural disinfectant. Its nature is still matter of speculation. Schönbein, its discoverer, regards it as a peculiar oxide of hydrogen; Berzelius and Faraday represent it as simple oxygen in a peculiar (or allotropic) state of modification; it has been suggested that it is an oxide of nitrogen; and quite recently M. Fremy has affirmed it to be what he calls "electrized oxygen,"—*i. e.*, oxygen modified in properties by the action of electricity upon it; a view not materially differing from that of Berzelius and Faraday. There are difficulties in the way of all these views, into which it is not necessary to enter. All that concerns our present subject is that, by different processes, a substance can be developed in the atmosphere which possesses remarkable disinfectant and oxidizing properties. The oldest known method of producing the so-called ozone, is the exposure of air to a stream of friction or high

tension electricity. Its odour may always be recognized in the neighborhood of an electrical machine whilst at work. Another method is the galvanic decomposition of water, when the ozone accompanies the evolved oxygen. A third, and the most convenient method on the small scale is the exposure of phosphorus in moist air. By these processes and certain others, air is made to acquire a striking power of oxidizing, bleaching, deodorizing, and disinfecting. We cannot doubt that every thunder-storm developes some ozone, and other processes also probably produce it. At all events the atmosphere frequently exhibits an oxidizing and bleaching power, at other times absent, which Schönbein, Faraday, and others, attribute to the development of ozone within it.

No one who has experimented on ozone will doubt its potency. I refer to it here because there are so many reasons for believing that it is the agent which prevents the accumulation in the atmosphere of volatile organic bodies, by converting them into water, carbonic acid, nitric acid, and ammonia, that we cannot avoid looking hopefully to it as destined to prove our disinfectant *par excellence*. Certain as we are that for thousands of years miasmata, malaria, poisonous effluvia, and every gas, vapor, and volatile body developed at the surface of the earth, must have found their way into the atmosphere, and that nevertheless its purity is not sensibly affected, we must regard the constituent or condition of the air, which has secured its purity during centuries, as one demanding special study. Further this constant process of disinfection has not interfered with the respiration of animals, so that we may fairly regard ozone as a substance applicable as a disinfectant in places occupied by human beings or by the lower animals. It is true that the power of producing influenza or catarrh has been attributed to ozone in excess; on grounds, however, almost entirely speculative. This view may or may not be true; but of this I am quite certain, that the well known impunity with which electricians expose themselves for hours together to the action on the atmosphere of large friction machines, which the dullest nostril can discover to be producing abundance of ozone, is enough to show that a large impregnation of the air with this substance, neither affects respiration nor produces catarrhal affections. We ought, therefore, I think, to give special attention to ozone. It is not likely that we shall be long without discovering new processes for its production. It will be specially valuable for what are the most important, and, at the same time, the most difficult occasions for disinfection—namely, where human beings cannot be removed from infected apartments. Examples of such cases are found in a large ship at all times, and still more when its crew and passengers are attacked by disease; in the wards of an hospital, from which the sick cannot be taken; and perhaps most strikingly in a large factory, where hundreds of persons assemble daily together, many of most uncleanly habits, and at epidemic seasons fresh from infected rooms, whilst the apartments contain valuable metallic machinery, and fragile silk, cotton, linen, or woollen goods, which interpose an additional obstacle to the free employment of gaseous disinfectants. The condition of our ships as regards ventilation and wholesomeness is proverbial; and on inquiry of

residents in Manchester and Glasgow I find, that where disinfection has been attempted in factories—which it rarely has—it has consisted in sending a man once a day through every room with a quantity of blazing pitch, which was supposed to fumigate into purity the atmosphere, whilst it set all the workpeople coughing.

How difficult it is to prevent the spread of erysipelas, gangrene, fever, and the like in hospitals, every medical man knows too well. Ozone at least deserves a trial as a disinfectant in such cases.

Antiseptics.—The only antiseptics to which I shall refer are two. The first is sulphurous acid; it is a powerful antiseptic, for it resists thoroughly the decomposition or decay of organic matter. In reality, however, it as much resists the development as the decay of organic bodies, and thus it doubly prevents the evolution of organic poisons. Dr. Christison long ago pointed out how small a quantity of this acid is sufficient to destroy plants. In the wine countries it has been used from time immemorial to prevent the souring or acetification of the lighter wines, when kept in casks partly filled. Professor Graham, who strongly recommends it as a disinfectant, draws attention to the fact that at Manchester the offensive effluvia of the cochineal dye-vats, which resist the action of chlorine and nitric acid, are at once destroyed by sulphurous acid. My own attention was directed to it from the employment of it on a large scale by paper-makers and others to secure the preparation of pure gelatine, a substance peculiarly liable to enter into putrefaction. Sulphurous acid can be easily prepared by burning sulphur, or by heating oil of vitriol, along with charcoal or vegetable matter. Its corrosive action is very slight; its disinfecting action very powerful. The sulphite of soda is now prepared in quantity at different chemical works. The addition of a stronger acid sets free the sulphurous from its salts. As to its mode of action, if we concur with Liebig in believing that morbific matters resemble ferments in being active, only whilst undergoing a decomposition which is mainly determined by the oxygen of the air, we may suppose sulphurous acid to render the poisonous matter inert, by preventing its oxidation. This acid, moreover, is a powerful deoxidizing agent, and it may be by removing oxygen from organic poisons that it renders them inert, by decomposing them.

Further, sulphurous acid can combine with certain elements of organic bodies, as we see in its temporary bleaching action on vegetable colors; and it may be thus that it neutralizes morbific matters. In one or other or all of those modes, this agent may act as a disinfectant; but at all events its action is very powerful, and it deserves much more attention than it has received.

The only other substance to which I shall at present refer, is pitch oil, one of the products of the distillation of tar. It is an antiseptic of the most powerful class, and very cheap, and if not used in excess, it is applicable as a deodorizer; but its own strong tarry smell interferes with its extensive use.—*Pharm. Jour.*

Test for the Presence of Mercury.—If a strong solution of iodide of potassium be added to a minute portion of any of the salts of mercury, placed on a sheet of bright copper, a white metallic silvery stain will be developed, which cannot be mistaken, as no other metal presenting a similar appearance is deposited by the same means. In this way corrosive sublimate may be detected, in a solution unaffected by potash or iodide of potassium. In a mixture of calomel and sugar, in the proportion of one of the former to two hundred of the latter, a distinct metallic stain will be detected with one grain of this mixture, containing but 1-200th of its weight of calomel; and the binoxide of mercury can be thus detected, if mixed with 400 times its weight of sugar. This valuable test we owe to Mr. Arthur Morgan.—*Annals of Pharmacy, from London Journal of Medicine.*

Reagent to detect the quantity of Urea in the Urine.—Mr. Liebig has recently made known the following prompt and easy way of detecting the quantity of urea in the urine. First prepare a neutral solution of nitrate of mercury in distilled water, to be kept by itself, and add a little of this gradually to the urine to be examined, until no further precipitate takes place. The quantity of the solution necessary to this result is, to a certain point, the measure of the proportion of urea. But the precipitate, which is formed, is composed of one equivalent of nitric acid and three equivalents of bi-oxide of mercury; hence for every equivalent of urea precipitated, there will be three equivalents of free nitric acid in the liquid. But the presence of this free acid interferes with the further formation of the nitrate, so that when precipitation has ceased, there is still more or less urea which has not entered into the new combination, and which can only be precipitated after the free acid has been saturated. This is accomplished by a solution of barytes, which must be gradually added so as not to exceed the limit of saturation. A fresh quantity of the solution of nitrate of mercury must then be added to produce a new precipitate; and thus, by the successive additions of this solution and of the solution of barytes, the whole of the urea contained in the urine will be precipitated. The quantity of the solution of nitrate of mercury used thus forms a sufficiently accurate measure of the quantity of urea in the urine.—*Bull. de Thér.*—*From Gaz. des Hop.*, 37 *Juillet*, 1852.

MATERIA MEDICA AND THERAPEUTICS.

On Adulteration of Sulphate of Quinine. By Dr. Moll.—The excessive price of the true cinchona, the calisaya of Bolivia, has led to the substitution of many inferior kinds, chiefly remarkable for their containing large proportions of *quinidine*. In consequence of their lower price they have obtained admission to the quinine manufactories in large quantities, and much of the sulphate now produced is depreciated by the addition of quinidine. This substance differs from the sulphate of quinine by its greater specific gravity and less flocculent crystalliza-

tion, and it is much more soluble than it is in water and alcohol. The addition of both *cinchonine* and *quinidine* may be detected by means of ether; for while cinchonine is almost insoluble in this substance, quinidine is so in a far less degree than is quinine, inasmuch as sixty drops of ether and twenty of ammonia will dissolve ten grains of quinine and only one grain of quinidine. On the addition of these quantities of sulphuric ether and liq. ammonia, to ten grains of quinine, with ten drops of dilute sulphuric acid, and fifteen of water, all will remain dissolved, unless cinchonine, or more than ten per cent. of quinidine be present, the mechanical impurities only appearing at the surface. If 10 per cent. of quinidine be present in the ethereal solution, it will soon crystallize on the surface of the ether. Traces of this substance can be yet more certainly discovered if ether saturated with quinidine be employed, when all that exists in the suspected salt will remain insoluble. If the powder contain cinchonine or more than 10 per cent. quinidine, it will remain undissolved at the line of demarcation of the two fluids. If it be quinidine, it is soluble in additional ether, which cinchonine is not.

To establish the purity of quinine, we must also assure ourselves of the absence of *inorganic* substances, by calcination in platina, or by a solution of the salt in alcohol. Sulphate and carbonate of lime, magnesia, &c., remain undissolved, while boracic acid, though soluble, betrays itself by its blue flame on conflagration. The absence of *organic* substances, as salicine, sugar, starch, stearic acid, is known by the colorless solution which takes place in concentrated sulphuric acid. The presence of *ammoniacal salts* is revealed by the odor which ensues on the addition of caustic alkali.—*Brit. and For. Med. Chir. Rev. from Revue Medico-Chirurgicale.*

Experimental Inquiry concerning the question, whether the Purgative Action of the Neutral Salts is the effect of Endosmosis? By Dr. H. AUBERT.—Aubert made his experiments with the purpose of examining the correctness of the view spread under *Liebig's* authority ("Untersuchung der Mineralquelle zu Soden und Bemerkungen ueber die Wirkung der Salze auf den Organismus"—*Wiesbaden*, 1839), that the purgative action of the neutral salts is a merely physical process, being the consequence of exosmotical transudation from the walls of the intestinal tube, effected by the more concentrated solution of these salts within the cavity of the tube. The experiments were instituted in the following manner:—Solutions of different neutral salts were put into a cylindrical glass tube, the lower end of which was covered with a piece of membrane, from a pig's bladder; then the tube was immersed into serum of blood, and the changes going on in the solution within, and the serum without, were examined at different intervals. Another series of experiments were made by taking internally solutions of these salts. As the result of both series, Aubert draws the following inferences:

1. The purgative effect is not influenced by the degree of concentration of the solution; the number of stools produced by a certain quantity of salt will be the same, whether the salt is dissolved in six or seventy-

two ounces; the water of the solution is excreted by the kidneys; the salt exercises its influence on the bowels. 2. No albumen is found in the alvine excretions, as ought to be the case, if the action of the salts was an endosmotical one. 3. The quantity of salt excreted through the urine, compared with the quantity of water contained in the discharge from the bowels, is not that which it ought to be, according to the laws of endosmosis and exosmosis (as much, at least, as they are known at present). 4. Peristaltic motion of the bowels is constantly excited by the neutral salts; the rolling and rumbling, which Aubert always observed soon after taking the salts, as well in a concentrated as when in a diluted solution, is attributed by him to the action of the salts on the nerves of the intestines, and to the reflex motion excited in consequence of this. 5. A part of the *sulphate of magnesia* appears to be decomposed within the organism, as the magnesia is excreted in a larger proportion than the sulphuric acid with the fæces; the sulphuric acid in a larger one than the magnesia with the urine. 6. The remedy produces the characteristic effect on the bowels, when a solution of it is merely infused into the veins of an animal.

It must be, however, remarked here, that *Liebig* himself, in a work of a later date, ("Untersuchungen ueber einige Ursachen der Saeftebewegung im thierischen Organismus," 1848,) states, that he does not intend to explain the whole action of the neutral salts by endosmosis, but that he considers this to be one of their influencing qualities.—*Ibid*, *from Henle und Pfeufer's Zeitschr. fur Ration. Medic.*

Zinc Ointment.—Our attention has been directed to the following remarks of Dr. Copland, Part xvi. of his *Dictionary of Practical Medicine*, p. 935, on the subject of zinc ointment:—

"Great care should be taken in this affection, as well as in others for which ointments may be required, that they be recently made. In a case to which I was lately called, the zinc ointment was prescribed after the use of emollient applications, and was found quite rancid and most injurious at *five different Chemists* in the outskirts of the town where it was had; but when this ointment was procured from a respectable Chemist in town, it was quite successful."

To guard against a recurrence of this accident, we would suggest that where the demand is small, it would be better not to keep the ointment ready, but to mix it when wanted.—*Lond. Pharm. Jour. January*, 1853.

Hospital Sulphate of Quinine.—Mr. Edward Herring has introduced a preparation under this name, consisting of disulphate of quinine only partially purified. In its medicinal properties it is said to differ but little from the ordinary disulphate. It has a brownish color, and is of course not admissible as a substitute for disulphate of quinine in general dispensing, but it has been tried in hospitals and dispensaries, and by some medical men who dispense their own medicines. The preparation is recommended on account of its economy. The final purification and decolorization of the salt being attended with some expense, the manu-

facturer is enabled to offer it in a partially purified state at a considerable reduction from the price at which it can be sold when purified in the usual way. The amount of impurity must be ascertained before its real value can be estimated. It may be a question whether the recognition of a preparation so imperfectly purified might not open the door to some abuse.—*Ibid.*

Generation of Oxalic Acid in Syrup of Sesqui-Nitrate of Iron.—Mr. J. LAIDLEY, of Richmond, Va., has shown, in an interesting paper in the last number of the American Journal of Pharmacy, that the *syrup* of *sesqui*-nitrate of iron is an unscientific and ineligible preparation; for, without an excess of acid, it is a mixture of proto and per-nitrate, and with that excess the acid generates oxalic acid. When a syrup of nitrate of iron is wanted, the *proto*-nitrate should be employed; in it there is no excess of acid to act on the sugar, which is employed to prevent peroxidation of the iron, and it is not only permanent but pleasant to the palate.

Compounds of Iodine with Quinine and Morphine.—Two compounds are announced in the *Jahrbach fur Prakt. Pharm.* (as we find in the last number of the Amer. Jour. Pharm.) as salts of Quinine and Iodine, and Quinine and Morphine, respectively. These compounds must, however, be iodohydrates of quinine and morphine, and not iodides.

The best Means to preserve Leeches Healthy. By GUSTAVUS SCHULER.—The apothecaries in Moldavia are, according to the sanitary laws, compelled to keep constantly a stock of at least 300 healthy and serviceable leeches. But, particularly as the hot summer months are the most prejudicial season for these animals, it often happens that in the time of the greatest need no leeches are to be obtained.

Amongst the various means which have been recommended to keep leeches healthy, and to restore the sick ones, good well-burnt wood charcoal has proved, according to my experience, to be the best, as shown by the following experiment. I washed the charcoal well three or four times with fresh spring water, to separate the adhering ashes, and then laid it, while wet, and without breaking it smaller, in a large glass cylinder; put the sick leeches, recently washed, into this cylinder, but did not give them any more water, as enough was to be found in the washed charcoal. The glass was tied over with a piece of linen and placed in a cellar, where for five days the leeches were resigned to their fate.

After this period I found the leeches, to my satisfaction, perfectly well. They were quite in a condition to be used, which was not the case in their sick condition.

For two years I have treated my leeches in this way, and always retained them healthy and serviceable. The number of deaths amongst them has been very small. The only precaution I observe is to place all my leeches for eight days in summer on recently washed charcoal, and for two weeks in winter. The method is a cheap one, and one easy of execution.—*Buchner's Repertorium, from Annals of Pharm. for Aug.* 1852.

Ol. Morrhuæ.—In Sweden, cod-liver oil has for some time been employed as an external application in the treatment of cutaneous maladies, and from that country it has recently been introduced into English practice. We have had frequent opportunities of watching its effects as prescribed by Mr. Paget, in the out-patient's room of St. Bartholomew's Hospital. The class of cases for which it appears most applicable, is that of chronic eczematous eruptions, unattended by acute inflammation of the skin or general pyrexia. In abating the troublesome itching which frequently accompanies this disease, especially in old people, it has manifested powers decidedly superior to those of any other application with which we are acquainted. In the majority of instances it can, of course, only be expected to assist constitutional treatment, not to supersede it.

We have as yet had no opportunity of forming an opinion respecting the proposed inunction of the oil in cases of phthisis, where the stomach cannot take it. Whilst on this subject, however, we feel inclined to strongly recommend the practice of exhibiting it *simultaneously with tonics*, as iron, quinine, etc., which is now adopted with great success at several hospitals. The digestion and assimilation of the oil appears to be much aided by such combination. In the treatment of cutaneous struma and lupus at the Hospital for Skin Diseases, it is usual to administer along with the oil small doses of mercurials, which are often continued for many months. The success attending this practice is very great, and appears to much exceed that which results from the administration of either drug alone.—*Lond. Med. Times.*

Ammonio sulphate of Copper.—At the Westminster Hospital, Dr. Hamilton Roe has recently employed this salt very successfully in the treatment of a series of cases of severe cholera, the patients being mostly children under fourteen years of age. In several the sulphate of zinc and sesquichloride of iron had been tried previously, and without benefit. The dose given has been from half a grain to a grain three times daily. Its use in this complaint is not novel, although not much resorted to in this country. In Italy it has gained a considerable reputation, and is known by the name of the "specific of Stissero." Mr. Startin has for some time been accustomed to prescribe a long continued course of the ammoniated copper in malignant diseases, and seemingly with some good results. Its action is probably that of a tonic. In several cases the health of the patient has appeared to improve very perceptibly. Scirrhus of the breast and cancroid ulcers of the skin are the forms in which it has principally been tried. The dose has ranged from the eighth to a quarter of a grain three times daily, and has often been continued for many months. We believe it has been employed for nearly similar purposes in veterinary medicine.—*Ibid.*

Infusion of the leaves of the Ash-tree (Fraxinus polygamie) in the treatment of Gout and Rheumatism. By Drs. POUGET and PEYRAUD.—The most useful acquisitions in materia medica are due generally to

chance, or, rather, to a protective Providence over human health; *e.g.*, the antiperiodic properties of cinchona.

In 1842, Dr. Peyraud experienced his first attack of gout, for which he employed the usual remedies. The attack lasted twenty-five days. During the three following years the disease increased both in frequency and violence, and the patient went through the several forms of treatment without finding relief. He heard, by accident, that the infusion of the ash-leaves had long been considered a specific in the department of Dordogne, and that the peasantry of the district used it to "chase away their pains." Dr. Peyraud found it upon trial so useful that he had but one attack of the gout from 1845 to 1849.

M. B., a merchant of Bordeaux, was seized with an attack of gout, for the first time, in the right foot. He was ordered infusion of ash-leaves; upon the second day he was able to come down stairs and to leave his house. Ever since, he has had recourse to the same remedy with good effect upon experiencing premonitory symptoms, such as headache, loss of appetite, etc. The same success followed its administration in cases of acute articular rheumatism. A house-painter, aged 23, had, upon several occasions, suffered from acute articular rheumatism, accompanied by endocarditis, which prevented his following his occupation for four months or more. December 25, 1849, he had pain in the articulations of the feet, knees, and wrists, with swelling, accompanied by difficulty of respiration and inability to lie down. December 30, he was so weak that it was thought better, before bleeding him, to try the infusion of ash-leaves. In about twelve hours, and after the third dose, the patient was able to breathe easier, and there were fewer precordial pains. On the fourth day, the articular pains had diminished in intensity, the respiration was freer, and the appetite had returned. Jan. 22d.—He was able to resume work. The authors now administer it in the form of a fine powder in preference to the infusion. Other cases are related in the Essay.—*Op. cit.*, Nov. 1852.

PATHOLOGY AND PRACTICE OF MEDICINE.

Contribution to the Pathological Physiology of Pneumonia. By Dr. G. ZIMMERMANN.—Zimmermann considers the most minute observation of the natural course of acute disease to be the only way of elucidating the laws of these typical processes. Although he thinks those cases most fit for the purpose in which no remedies are employed, yet he does not at all exclude those in which the treatment is active. As an instance of how to observe, he describes the course of a case of pleuropneumonia, treated by repeated venesection, application of blisters, and internal administration of antiphlogistic remedies, in moderate doses. From the first day of the fully established disease, till after the return of convalescence, he has noted twice daily (at 8 A. M. as the time of remission, and between 5 and 6 P. M. as the time of exacerbation) the temperature under the tongue, the frequency and other qualities of the pulse, and the number of inspirations on almost every day, the quantity

of urine secreted in 24 hours, its specific gravity, and the quantity of lithic acid contained in it. Of great interest are the *critical symptoms*, remarked on the 3d and then again on the 9th day, after which we observe a steady progress to convalescence. The first note on the *temperature* was taken four hours after an attack of general vehement rigors, which the patient himself considered as the commencement of the disease; it was then as high as 105°10, which, being 4°14, over the normal warmth of that individual (98°96,) makes Zimmermann inclined to conclude, that the disease had commenced before the occurrence of the rigors. Between the evening of the 2d and the morning of the 3d day, a decrease from 104°0 to 99°87 was observed, coincident with a general abatement of the constitutional symptoms of pyrexia, but on the evening of the 3d day, the temperature was again as high as 105°80 and the physical examination exhibited the signs of hepatization, which had not been present in the morning. Between the evening of the 8th and the morning of the 9th day, the warmth had decreased from 106°16 to 99°50: at the same time all the other febrile symptoms disappeared almost completely, after they had reached a very high degree on the two previous days. It is interesting to remark, that although the frequency of the pulse did not exceed the normal average after that period, yet the temperature increased again to 102°20, and remained so for more than a fortnight longer. The entrance of the change on the 9th day, does not appear to Zimmermann as merely accidental, but he looks at this day as a critical one; and also the coincidence of several alvine evacuations effected by calomel seems important to him, as he thinks that the crisis may be promoted by our remedies, if their action takes place shortly before or on the beginning of a critical day. Concerning the *urine*, the quantity secreted in twenty-four hours was between 9040 and 29,030 grains; the minimum is noted on the 5th, the maximum on the 9th day; the average quantity of 24 hours before the 10th day, was 15,215 grains, with an average specific gravity of 1·0198; between the 10th and the 40th day, 16,510 grains, with 1·0208 specific gravity. The quantitative examination for *urea* was not made before the 8th day, on which 1081 grains were contained in the urine in 24 hours; on the 9th day, only 884 grains; and a few days later, not more than 400 grains (which is about the average quantity during health—*Lehmann*, Physiol. Chem., vol. i. p. 167.) The quantity of *uric acid* was almost normal during the commencement of the disease, but after the sixth day it appeared considerably increased, and reached the maximum on the 9th day, when it amounted to 3770 grains in twenty-four hours (which is at least three times more than the average during health—*Lehmann*, l. c. p. 217.) Zimmermann considers this increase of the uric acid and its salts, at the period of the critical change, as important for the doctrine of *crisis*, as he had opportunity to observe the same phenomenon, not only in pneumonia, but also in typhoid fever, ague, measles, &c. From three examinations of the blood obtained during the first seven days in this case, and from his previous experience, Zimmermann considers as the most important changes in the *inflammatory blood*—that it is less coagulable than the blood in health; that the quantity of fibrine is aug-

mented; that the colored blood-globules are diminished in number, and possess an abnormal disposition for the formation of rolls; that the colorless globules are found in an increased proportion, and show, likewise a tendency to join in groups.—*Brit. and For. Medico-Chirurg. Rev.*, from *Prager Viertiljahrschrift.*

Virchow's Views on Tubercle.—Virchow, in late papers on this subject, advances the opinion that tubercle is the result of a metamorphosis of organized elements. The following is the summary of his views.

"1. Tuberculization, the indubitably local process by which the body described by the name tubercle is formed, is not a peculiar specifice exudation, but a peculiar transformation of tissue elements, such as in 1847 I described in regard of cancer under the name of tuberculous metamorphosis.

"2. The tuberculous metamorphosis is therefore co-ordinate with the fatty and the waxy metamorphosis, calcification, and atheromatous degeneration, but in no way co-ordinate with inflammation or serous effusion, and even less so with suppuration or with cancerous formation.

"3. The tuberculous metamorphosis sometimes affects newly-formed pathological tissues, sometimes the primitive, the so-called physiological tissues, and finally, sometimes it affects both old and new simultaneously, and this last is its ordinary and peculiar characteristic. The tuberculous metamorphosis attacks cellular and transitory as well as fibrous and permanent elements.

"4. The tuberculous metamorphosis consists in a cessation of the nutritive and formative processes, in a mortification, death of the elements of the tissue, with subsequent peripheric absorption of the fluid constituents, and drying-up of the parts lying beyond the sphere of nutrition; the death itself of the elements of the tissue is caused by the accumulation of cell-elements, and is immediately determined by compression of the vessels of the part.

"5. These cells may arise from an absolutely new formation, or from an increased formation of the normal elements (epithelia, enchymkörner, &c.,) or, finally, from an endogenous formation (ans einer endogenen Bildung.)

"6. All these processes presuppose definite disturbances of the local nutrition, especially an altered exudation, and point back, accordingly, either to inflammation itself or to an analogous affection, no matter whether they owe their origin to an irritation produced by local mischief, or to an excitation consecutive to constitutional causes, primary changes of the blood, &c.

"7. There is therefore an inflammatory, cancerous, typhous, glanderous, sarcomatous, &c. tuberculization, which are altogether the same in reference to the essence of the local process, so far as this depends on tissue metamorphosis, but which are more or less different in reference to the essence of the whole process, as well so far as the latter is local (disturbance of nutrition, exudation, &c.,) as also when it is due to general constitutional causes.

"8. Tuberculosis is the whole process of the affection, comprising the conditions of the local disturbances of the process of nutrition with the

changes appertaining to it in the exudation, both in regard of the cell-formation and transformation, and finding in tuberculization its constant regular expression. Every tuberculization (tuberculous metamorphosis) does not have its origin in tuberculosis; tuberculosis can be present, as far as its early stages (exudation, cell-formation) are concerned, and yet there may be no tubercle. We shall therefore call that diseased process tuberculosis, which in its ordinary course always leads to tuberculization; while we shall ascribe cancer and sarcoma, which accidentally tubercularize, to an altogether different process, and shall never give the name of tubercle to a thickened abscess, pus become cheesy, or pus concret.

"9. Scrofulosis is the constitutional affection which, after glanders and typhus, the most frequently produces tuberculosis—i. e., the local disease with the regular termination in tuberculization. But all its products are not tuberculous; tuberculosis is rather co-ordinate with a succession of other local processes.

"10. As tubercle is everywhere formed by the accumulation in the tissues of cells of the most varied kinds, these cells in the majority of cases breaking up, it has no peculiar characteristic elements. The shrivelled nuclei arising from the remains of the cells exhibit the greatest degree of constancy in their outward characters, and therefore we can retain for them the name of tubercle-corpuscles."—*Brit. and For. Med. Rev.*

Silicious Deposit in the Urine, supposed to be from the use of new sponge. By HENRY JOHNSON, M. D., Senior Physician to the Salop Infirmary. Silicic acid is a well-known constituent of natural urine and of urinary calculi; and it is always found in urinary concretions derived from brutes, according to Wurzer and Lapaigne. But although, on the authority of these names, the occurrence of silex in urinary deposits and concretions may be deemed possible, this event is at any rate extremely rare, and, unless under peculiar circumstances, would be ascribed to accident, fraud, or mistake. I have, however, seen it, where the parties were far above all suspicion of any intention to deceive, and where the patient was too young and *girlish* to be the subject of that morbid *pruritus*, which probably leads to the *voluntary* introduction of foreign substances per vaginam.

As every case is of importance which proves a fact, or points out an obvious source of error, I think the following history is worth recording:—In 1850, I was desired to examine a small portion of white powder, which I understood was a deposit from urine; it had all the chemical characters of *silex*, and scratched glass with facility. I was informed, that notwithstanding every precaution having been taken to avoid error, more or less of this powder had been found at the bottom of the utensil for about a fortnight. I afterwards saw the patient. She was 11 years old, of spare habit, but tall for her age, and by no means strong. She was subject to sickness and anorexia; the bowels were torpid; the tongue was not clean; the catamenia had never appeared. At the time of my seeing her, the silicious deposit had ceased. The urine was pale, had a specific gravity, verging from 1011 to 1031, there was a light mucous cloud in it, and it contained some prismatic crystals of triple phosphate, and on another occasion urate of ammonia and a large quantity of urea.

The most distressing symptom was a most constant desire to pass water, by day and by night, so that she could not rest, and if the desire was not speedily gratified, the urine escaped involuntarily.

There appeared to be no organic disease present in this case, and the patient ultimately got well without any remarkable symptom or treatment. I feel quite satisfied that there was here no endeavor to impose upon her medical attendants, either on the part of the patient or her friends. The silicious deposit I have no doubt arose from the use of a *new sponge*. A silicious powder (quartz) is always found in sponge when new, and I have since seen a large quantity of this sort of dust, which had fallen out upon the shelf in a chemist's shop where these articles were kept; it is nearly pure silex, because sponges are prepared for sale by being soaked in dilute muriatic acid, which removes calcareous particles, and leaves such as are silicious.—*Prov. Med. and Sur. Jour.*

The Respiration in Pressure on the Brain. By Dr. LANDGRAF.—Dr. Landgraf calls attention to the state of the respiration, in cases of cerebral pressure. It is frequently not stertorous and labored, as described in books, till the agony; but it is interrupted; that is to say, after from six to twelve tranquil and easy respirations, a long pause insues. The author details cases in proof of the existence and diagnostic value of this sign.—*Ibid., from Deutsche Klinik*, 1852, p. 39.

Temporary Albuminuria. By Dr. BEGBIE.—Dr. J. W. Begbie alludes to the phenomenon of albuminuria in the following diseases:

1. *Scarlatina Simplex.*—He confirms his former statement that about the period of desquamation, albumen can *almost* always be found; its presence is associated with renal epithelium, but not with casts of tubes.
2. *Cholera.*
3. *Erysipelas.*—Usually at resolution or during convalescence. Its presence is not constant, nor its quantity great.

The albuminuria in these three cases is called *desquamative.*

4. *Scarlatinal Dropsy.*—The albuminuria may, or may not, be temporary—blood exudation corpuscles, and casts of tubes, accompany it.

The albuminuria in this case is termed *inflammatory.*

5. *Pneumonia*, at the period of resolution, in almost all cases.
6. *Typhus* and *Typhus Abdominalis* (typhoid.)—From a consideration of the period when the albumen is observed in these last-named diseases, Dr. Begbie terms it *critical albuminuria.—London Monthly Journal*, Oct. 1852.

On Albumen in the Urine of Various Diseases.—Heller asserts that albumen is present in the urine in all kidney-lesions, though sometimes in small quantity, and that it exists in many other diseases, and often in greater amount.

1. *Pneumonia* and *Tuberculosis acuta.*—At the commencement of exudation, while yet the chloride in the urine is in undiminished quantity, no albumen can be found. As exudation increases, and as the chloride in the urine diminishes, a very small quantity of albumen appears,

and continues for a long time. This appearance is not constant, but is very frequent. The greater the albumen, and the less the chloride in the urine, so much the worse is the prognosis.

2. *Pleurisy.*—Albumen does not appear so frequently, even when the chloride is much diminished. In the period of absorption it sometimes occurs, and is attended with carbonate and hydrothionate of ammonia.

3. *Acute Liver-Affections.*—In chronic or subacute inflammations, where the chloride of the urine is diminished, albumen appears as in pneumonia.

4. *Pericarditis* and *Endocarditis.*—In the first case albumen sometimes occurs; in the last, very seldom even when the chloride is much diminished.

5. *Peritonitis.*—Albumen is frequently found, and continues sometimes long after the customary amount of chloride has reappeared, and morbus Brightii is then, perhaps, left.

6. *Metritis* and *Eclampsia Puerperalis.*—As in peritonitis.

7. *Cholera.*—More or less albumen.—*Prov. Jour, from Archiv. für Pathol. Chem.*, Band i. Heft 8.

Hints for the Treatment of Hydrophobia. By Dr. MARSHALL HALL.—Many years ago I had the opportunity of watching the course of a case of hydrophobia. It occurred in a little boy; and I scarcely left the room during the eight-and-forty hours that he survived. But I need not detail the series of symptoms which occurred, and which I have described elsewhere, on the present occasion.

It has appeared to me that there are *three* modes of death in this disease:—1. Sudden death from asphyxia. 2. Sudden death from secondary asphyxia. 3. Sudden death (for in all the cases I think the death is sudden and unexpected at the precise moment at which it occurs) from nervous exhaustion.

Either of these modes of dissolution would be averted by the timely institution of tracheotomy. Indeed, if this measure were adopted, the frightful seizures which occur from trying to take liquids would be obviated. These seizures consist in fearful attacks of laryngismus, and of convulsions of the neck and pharynx, but chiefly of laryngismus, with threatening of instant suffocation. These seizures would be disarmed of their force and terror by tracheotomy.

Tracheotomy thus obviating the *effects of laryngismus*—1. The sudden death from asphyxia, the immediate result of asphyxia, could not occur; and 2. The sudden death from secondary asphyxia, the more remote result of many attacks of laryngismus, could not occur!

There remains the sudden death from exhaustion. It is a question whether this would occur necessarily from the poison of hydrophobia. Why should it occur *necessarily* from this poison? No reason can be given for this; and we are not to be misled into a conclusion unsupported by facts, since, though all cases of hydrophobia have proved fatal, they have proved fatal by a mode by which they would not occur if tracheotomy were performed.

Could any measures be adopted to check the violence of the spasm,—

laryngismus and its effects being obviated,—such as the hydrocyanic acid, and so to prevent the subsequent exhaustion? Or could any remedies be adopted to remove this exhaustion more directly, as wine or cinchona?

These hints I throw out for the consideration of my professional brethren, in the *hope* of *good.—Lancet.*

Treatment of Diabetes by Rennet.—Dr. Gray, of Glasgow, has lately treated a case of this disease, of at last twelve months' standing, by means of rennet, as prepared for the dairy, in doses of a teaspoonful three times of a day, in which dietetic treatment had been of only partial benefit, and various medicines of little use. He was led to give it from the action of rennet out of the body in converting sugar into lactic acid, which, according to Liebig, is one of the principles of the organic world, which can support respiration by being oxidated in the lungs; while sugar cannot be oxidated by them, and is therefore thrown off as excrementitial by the kidneys.—*N. Y. Med. Times,* Feb. 1853.

Permanganate of Potash in Diabetes.—A gentleman, upwards of 60, residing in the country, had for several months been suffering from confirmed diabetus mellitus when I first saw him, two years and a half ago. In the course of the twenty-four hours he passed from ten to twelve pints of urine, the specific gravity of which was 1.035 in the morning, and 1.040 in the evening. The patient was greatly emaciated, and he suffered severely from constant pains in the back and thighs, and from increasing debility. After he had perseveringly tried various remedies for nine or ten months, without deriving any benefit, I began, in August, 1850, to give him the permanganate of potash in solution, in doses of two grains, which were afterwards increased to three grains, three times a day. In the course of a few days a visible improvement took place; he felt better; the quantity of urine began to diminish, and the thirst became less troublesome. These favorable symptoms were soon followed by some return of appetite, and a gradual increase of strength. This amendment went on without interruption; the medicine was continued for three months, until the following November, when all medical treatment was discontinued, as the patient felt quite well, and the urine was reduced to its natural amount. A remarkable fact must, however, be mentioned, that at that time, notwithstanding the restoration of the general health, the urine still contained a considerable quantity of sugar. I am not aware whether this state still exists, but the patient's report to me a few days since ran thus: "I pass less than a pint of urine during the night, somewhat more during the day; the pains are gone, and I can walk a fair distance without fatigue." The dose of permanganate of potash which I have generally found to agree best with the stomach, is from one to three grains in solution, and it should be given in three or four tablespoonfuls of water three times a day, shortly before meals.—*Mr. George Sampson in Lancet.*

Phosphate of Lime in its Relation to the Nutrition of Animals, and the Mortality of Children.—Dr. Mourier addressed a memoir on this subject to the French Academy of Sciences, in July last, in which he states that the principal object of phosphate of lime in the system is not, as is commonly supposed, the formation and nourishment of the bones; but that its more special action is to produce and keep up vital irritability, and that it is found in animals in a definite quality, but varying according to their temperature, youth and vital activity. He says that in cities especially, the fœtus and infant seldom obtain the quantity necessary for their developement and existence; hence, this is evidently one of the causes of the very great mortality of children, especially in cities.—*Archives Génér.*, Sept. 1852.

Impending Death by Chloroform: Resuscitation by raising the Epiglottis, and direct Insufflation.—One of M. Ricord's pupils has just addressed a letter to this surgeon, in *L'Union Médicale*, wherein he states that he succeeded in rescuing from the grave a patient of his (who was being asphyxiated with chloroform,) by following M. Ricord's plan of resuscitation. The lady was having some verrucæ removed from the vulva, &c., and had been narcotized with the handkerchief and pledget of lint impregnated with chloroform within it. She was rather hysterical, and had had a fit when under the influence of chloroform some time previously. In this instance, narcotism was obtained after seven minutes' inhalation, and the handkerchief was removed from the mouth from time to time. After the first verrucæ were excised, sensibility returned; chloroform was given again, and in four minutes the whole operation was finished, but the patient was pronounced pulseless, and the ear applied to the chest could perceive no cardiac sounds. The operator, in great alarm, passed his finger into the posterior part of the patient's mouth, and found the epiglottis covering the entrance of the larynx. By pulling the tongue forward, and pressing the base of the epiglottis, the larynx was freed, and the young surgeon then applied his mouth upon the patient's and vigorously insufflated the lungs, whilst one of the assistants (there had been two all along) pressed down the parietes of the thorax. This was repeated twice for five minutes at a time; and the patient, who a few moments before, was a mere corpse, gradually recovered, and has done well.—*Lancet.*

The Solution of Urinary Calculi in Dilute Saline Solutions, at the Temperature of the Body, by the aid of Electricity. By H. Bence Jones, M. D., F. R. S., Physician to St. George's Hospital.—This paper contained the record of a number of experiments made to determine whether, out of the body, urinary calculi could be dissolved by placing them in dilute solutions of nitrate of potash and other salts, and then decomposing the solution in contact with the calculus by means of the galvanic battery. The urinary calculus was carefully dried and weighed, then fixed between the poles of a galvanic battery, after which it was immersed in a solution of nitre, and at the end of the experiment it was re-dried and re-weighed. The loss of weight gave the effect

which was produced. The different calculi which had been used were also exhibited, showing the different degrees in which the various kinds of urinary calculi are dissolved when submitted to this treatment. The conclusions at which the author arrived, may be thus stated: In a solution of nitre containing 20 grains to the ounce, kept at the temperature of the body, uric acid calculi can be dissolved by the aid of electricity, at the rate of from 2 to 9 grains an hour. The solution takes place at the alkaline or negative pole. In the same time, and under the same circumstances, phosphatic calculi can be dissolved at the rate of from 2 to 25 grains. The solution takes place at the acid or positive pole. Calculi, consisting of oxalate of lime, proved to be far less soluble, usually not more than half a grain an hour, and at most 2 grains being dissolved. At the conclusion of the reading of the paper, the author stated, that he had been engaged in making further experiments with a solution of nitrate of potash containing only 10 grains to the ounce; and he exhibited some large uric acid and phosphatic calculi, which had been partially dissolved by the decomposition of this solution at the surface of the calculi. He also showed a catheter or litholyte, made by Weiss, which fulfilled the conditions requisite in an instrument for effecting the solution of urinary calculi in the body. It resembled an ordinary lithotrite, but the blades were—1st, isolated so as to conduct the electricity to the surface of the stone when it had been caught; 2ndly, the external surfaces of the blades were guarded, so that in case they came in contact with the mucous membrane, no chemical action would be there set up; 3rdly, a double channel for the injection of the solution of nitre was formed inside the instrument. Lastly, the author stated, that although many difficulties would have doubtless to be overcome before he could lay the result of his experiments within the body before the Society, still they would only be mechanical difficulties. The principle, which consisted in setting up mechanical action at the spot where it was wanted, whilst elsewhere a dilute neutral solution was present, left nothing further to be desired; at least so far as the solution of uric and phosphatic calculi was concerned. At present, by the aid of the lithotrite, mechanical force is applied to the surface of the calculus, and the stone is passed in fragments. At some future time, by the aid of the litholyte, chemical force will be set up at the surface of the calculus, and it will be passed in solution, or as an impalpable precipitate. —*London Med. Times.*

SURGERY.

Iodine Injection of the Joints. By M. Velpeau.—Amongst the affections of the joints, effusion into them is a very common affection, but is only serious as a symptom of the disease which accompanies it. When it occurs as a serous interarticular effusion, without any marked material lesion, recent hydrops articuli is easily cured by rest, bleeding, and topical applications, such as solutions containing muriate of ammonia or chloride of sodium. When the effusion resists these means, M. Velpeau

applies a large flying blister, repeated every fifteen days, and then uses frictions with mercurial or iodide of lead ointment (the latter being preferable to the iodide of potash,) aided by compression, the administration of calomel in small doses, and especially rest. There is another remedy now used—namely, the injection of tincture of iodine. M. Velpeau has only tried it twice this year; but from these two cases, it is plain that the injection thus used is neither very painful nor dangerous, and that when thus cured, the joint is not anchylosed. In one very bad case particularly, the injection was not more painful than when used for the cure of hydrocele, and succeeded where the other means referred to had failed. It is necessary that the treatment by iodine injection should be made more generally known, as it is not usually practised. The two points which deter surgeons from using it are, the fear of throwing an irritating fluid into a large joint, and of anchylosis taking place in case of success.

Now, both these dangers are imaginary. There is no previous incision, but a simple puncture made. Since 1839, M. Velpeau has used this plan twenty-five times, M. Bonnet perhaps as often, so that with cases of the same kind, related by Berard, and since by M. Jobert, Malgaigne, and other surgeons, there are more than one hundred cases of these joints having been punctured and treated by the iodine injection, and none of the patients have had any unfavorable symptom. The swelling, with slight redness, which appears after the operation, only shows that a natural process is going on, such as takes place in a hydrocele, and is resolved without the application of leeches, &c.

As to the danger of anchylosis, it is equally imaginary. M. Velpeau has seen these patients long after the operation, and in all the movements of the joints were preserved. It is, in fact, in these cases, as in hydrocele, the cure can be effected without the obliteration of the serous sac; or if adhesions do take place, they yield after a time, and the function of the joint is restored, so that this is no serious objection; and, as on the other hand, there is complete cure in one-half the cases, and very marked amelioration in the other, it is to be concluded that the iodine injection, under such circumstances, when as yet there is no induration, is suitable, and the more so, as its use does not prevent that of other accessory means of cure.—*Dublin Med. Press, from Presse Médicale de Belge.*

Dislocation of the os Humeri upon the Dorsum Scapulæ, reduced after the expiration of five weeks.—Prof. PAUL F. EVE, of the Nashville University, reports a case of this kind in the January number of the Nashville Journal of Medicine and Surgery.

Iodide of Sodium in Constitutional Syphilis.—Dr. Gamberini, of Bologna, has written a paper on the use of iodide of sodium in the treatment of constitutional syphilis, which he concludes with the following resumè:

1. Soda being a very common ingredient in our organism, the iodide of its base appears best suited to the human system.
2. The taste of the iodide of sodium is much less disagreeable than that of iodide of potassium.
3. It is less likely to occasion iodism.
4. It is better borne than the potassium salt; and in consequence of this, its dose can be almost daily increased, and it thus becomes a more efficient remedy.
5. It has sometimes succeeded, when the iodide of potassium had failed.
6. We may commence by giving daily, in three equal doses, a scruple of the salt dissolved in three ounces of distilled water, increasing the strength of the solution every two or three days by six grains. More than two drachms a day are thus sometimes taken without inconvenience.
7. The iodide of sodium is admirably adapted to the cases in which the corresponding salt of potassium is indicated.
8. The iodide of sodium is the best substitute for mercury.—*Dublin Quart. Journal*, Nov. 1852.

Case of Dislocation of the Eye. By WILLIAM JAMESON, M. D., F. R. S., Surgeon to Mercer's Hospital.—Dr. Jameson detailed before the Surgical Society of Ireland, Dec. 4th, 1852, a case of dislocation of the eye which had lately come under his observation in Mercer's Hospital:—Peter Nowlan, ætat. 30, a powerfully able and muscular man, a corn porter, was admitted into Mercer's Hospital on the 3d of November, at half past twelve at night. His wife informed me that he came home that evening at ten o'clock in a most intoxicated condition, and while staggering about his room, struck his right eye against a small iron hook or nail that was in a dresser, which entered at the outer angle of the upper eyelid of that side, and when she went to his assistance discovered his eye protruded from its socket. She was most anxious to remove him at once to hospital, but could not succeed in prevailing on him to go until half past twelve at night, when in a few minutes after this I saw him.

He was very boisterous and unruly, had a large check apron held close up to his eye, which he kept constantly rubbing and pressing against it. On its being removed, he presented a most peculiar, and I might add, frightful appearance. There was the right eye protruded out of the orbit, firmly fixed and immoveable, staring, elastic to the touch, and devoid of all power of vision. The cornea was dry, cloudy, and rather opaque, pupil moderately contracted, and uninfluenced by the light of a candle. There was no extravasation of blood, nor was there any vascularity of the conjunctiva, although its reflection from the upper lid on the globe of the eye was partially torn through. The inferior margin of the upper lid was not visible, as it was placed behind the globe and spasmodically closed.

With difficulty I could get him restrained, as he was such a powerful man, but having accomplished it, I then, with two fingers of my left

hand, elevated the upper lid, at the same time, with the finger and thumb of my right, pressed the ball of the eye, and immediately it was drawn back with a distinct snap, and the lids closed over its anterior surface. I now, for the first time, observed the small wound before alluded to at the outer angle of the upper lid, but could not ascertain or form any conjecture at the time what amount of injury he might otherwise have sustained. I therefore had him conveyed to bed, and ordered cold to be assiduously applied to the part for the remainder of the night.

4th. The following morning, at visiting hour, we found him sober, but recollecting little of what had occurred. His eyelids were a little swollen; there was some slight vascularity of the conjunctiva; the *cornea was clear, shining*, and moist, and the tears ran down the cheek; he could distinguish the daylight; complained of pain in the head, and a deep pain in the globe of the eye, with full pulse. He was ordered to have ʒxvi. of blood taken from his arm, bowels to be freely opened, and the cold to be continued to the part.

5th. Lids less tumid; pain and vascularity of conjunctiva almost gone; complains of the sensation as if gravel were between the lids; vision improved, but sees objects imperfectly, as through a thick haze. Ordered the tart. ant. mist., low diet, and the cold application to be continued.

6th. All pain gone; conjunctival vascularity less; sensation as if gravel were beneath the lids gone; vision nearly restored; has complete power over all the motions of the eye. Continue all.

7th. Convalescent; no suffusion; no pain; vision complete. 9th. Discharged cured.

The foregoing case Dr. Jameson considered to be one of great interest, when we reflect on the novelty and nature of the accident, and the mode of its being inflicted. In the first instance, the great escape the orbital plate of the frontal bone had of being pierced, and consequent injury to the anterior lobe of the brain. Again, the length of time the cornea was left uncovered by the palpebræ, being two hours and a half, and all that time coarsely rubbed by the apron. The great state of tension the optic nerve must have been kept in without permanent loss of vision. The escape the muscular attachments had of being torn from their origins, which evidently must have been the case from the subsequent perfect control retained over all the motions of the eye, as soon as the very slight amount of inflammation produced by the accident was removed. The powerful contraction of the orbicularis muscle behind the globe, with the complete restoration of vision. And finally, the trifling amount of constitutional disturbance and local inflammation that followed what appeared to be at first sight so very grave an accident to so very delicate an organ. These, he said, are points which add considerably to the interest of the case.

Dr. Jacob said the Society were greatly indebted to Dr. Jameson for the very interesting case he had just brought under their notice. As far as he could recollect, one of exactly the same kind was scarcely to be found on record. He thought it was a case which ought not to be dismissed from their consideration, without some suggestion to account for

the occurrence of such an accident. He would solve the matter in this manner: Some persons were born with very large eyes and shallow orbits, and often, while examining the eyes of such persons, he found that by pressing the lids above and below, he could with ease get a view of the back of the eye. It was not that he merely saw one-half of the eye, but by a little manipulation of the eyelids, in persons with a shallow orbit and a large eyeball, he could obtain a view of the posterior part of the ball. Now, if by means of violence, the lids were tucked in above and below, they would grip the back of the eye and produce a downright protrusion of the organ from the orbit. He could not conceive any other way in which the accident could happen, because, as they might recollect, neither the muscles nor the optic nerve were torn in the case described by Dr. Jameson.

Dr. Jameson—The circumstance of the eye being drawn back with a distinct snap, shows that the muscles were at least on the stretch.

Dr. Jacobs—Yes, that is quite evident.—*Dublin Med. Press.*

ANATOMY AND PHYSIOLOGY.

The Laws regulating the Bodily Temperature and the Frequency of the Pulse. By R. LICHTENFELS and R. FROHLICH.—The authors have made a most careful series of experiments on themselves. Each experimenter is twenty-two years of age; the pulse of one of them is normally 71 per minute, that of the other 88; the normal temperature of each is 98·434. During the course of the experiments, they rose shortly before 7 A. M., took coffee between 7 and 8, had dinner at 2, and evening-coffee between 7 and 8.

1. *Daily rate of pulse and temperature.*—The influence of the period of the day, *per se*, was very trifling, but both pulse and temperature were greatly affected by food. Before the morning-coffee, the pulse was lowest; by the end of the first hour after coffee it rose, on an average of many observations, nearly 8 beats per minute; it was slightly less rapid at the end of the next hour; at the end of the third hour it was only 3·3 beats; and at the end of the fourth, 2·77 beats over the original number. The pulse did not sink to the number noted before coffee, till six hours had elapsed. The mid-day meal raised the pulse again, and this occurred apparently sooner after protein than after starchy food, but to a less extent. After the evening coffee, the pulse, which had fallen, again rose, but to a less extent, and its declension occurred more rapidly.

The temperature of the body was affected in a similar way by food, but the augmentation occurred later than the rising of the pulse; so that the temperature was often at its maximum when the pulse had fallen considerably towards the point from which it had risen. The average amount of increase is about ½ of Fah. The greatest average range of the thermometer in the course of the day (between 7 A. M. and 10 P. M.) was rather less than a degree of Fah.

2. *Influence of customary liquid.*—The experiments were performed in the afternoon; each lasted 100 minutes, and the greatest tranquillity

of body was preserved. After *beer*, the pulse sank 6 or 7 beats in from 10 to 15 minutes; in 30 minutes it regained its former frequency; much before this time, the subjective feelings of slight incipient intoxication were felt. In about two hours, the pulse was heightened nearly double as much as it had been depressed. The temperature, after the use of beer, fell about one-third of a degree of Fah. After *wine*, the pulse at first fell in the same way, and then rose greatly; the temperature fell about half a degree of Fah. The same occurred with alcohol, but afterwards the temperature rose about a quarter or half a degree of Fah. Cold water lessened, at first, the number of the pulse, and lowered the temperature. In 15 minutes both returned to their former amount. Coffee, as already said, raised the pulse, but more in the morning than in the evening.

3. *Influence of fasting.*—Fasting for from 20 to 21 hours lowered both pulse and temperature. At the end, the pulse was from 12 to 16 per minute; the temperature as much as 1·8° Fah., under the normal. The curious observation (made also by Davy and Gierse) was noted, that at the period of customary meal-times both pulse and temperature slightly rose.

4. *Influence of muscular movements.*—Various experiments were tried with different kinds of movements. 1. A ten pound weight was allowed to hang from the arm for five minutes, the body being tranquil; the pulse first fell in frequency, then rose; its greatest frequency was after the termination of the experiment. When the weight was on the left arm, the rise was nearly double that which occurred when it was on the right arm. 2. A weight of one pound was held out horizontally; the pulse rose and fell remarkably several times. 3. A weight of two pounds was rapidly swung round and round with one arm, while the other was placed on a table, that the pulse might be counted. This exercise produced the greatest effect on the pulse, raising it sometimes from 30 to 50 beats. 4. Long-continued moderate exercise, carried on to fatigue, raised the pulse greatly for some considerable time, but never produced the enormous rise noted in the previous kind (3) of muscular exertion.

5. *Influence of narcotic poisons.*—*Belladonna* and *atropine* at first diminished the frequency of the pulse (16 to 20 beats), but after a variable time (50 to 117 minutes,) the pulse again rose (12 to 30 beats.) The smaller doses produced greater primary sinking than the large, but required much longer time to do so; on the contrary, the larger doses produced much greater secondary rising; that is to say, the maximum sinking-point is inversely, and the maximum rising-point is directly, proportioned to the amount of the drug. It might be said that small doses depress, larger excite, the pulse. The temperature was diminished in all cases. *Opium*, especially in small doses, caused rising of the pulse, but afterwards there was great sinking, and the temperature diminished. The *Cannabis Indica* produced many periods of rising and falling; the temperature rose for about four hours, and to as great a degree as ·7° or 1° Fah. *Chloroform* and *ether*, if not pushed to too

deep narcotism, raised both temperature and pulse.—*British and Foreign Medico-Chirurgical Review.*

The Comparative Anatomy and Physiology of the Salivary Glands in Man and other Vertebrate Animals. By M. C. L. BERNARD.—Anatomy shows the group of salivary glands as an homogeneous apparatus, of which the different parts are identical in structure. Physiological analysis, on the other hand, teaches that the secreted products are of different composition. In spite of the mixture of the different kinds of saliva in the mouth, their functions remain distinct. The characteristic of the parotid is to secrete for mastication; that of the submaxillary for taste; that of the sublingual and buccal for deglutition. We cannot expect to find in birds the homogeneous types of the parotid and submaxillary glands, because the functions connected with these two organs, namely, mastication and gustation (taste,) are wanting. The viscid and glairy secretion which flows from their glands has nothing in common with the parotid and submaxillary fluids of mammalia, but it is identical with that furnished by the sublingual and buccal glands. In mammalia, which masticate hard and dry articles of food, the parotid attains its extreme development; in those which, as the phoca, live in water, and feed off moist substances, this gland is atrophied, or absent altogether. The other glands retain their size according to the necessity of the functions over which they preside.—*L' Union Medicale*, 1852.

Chemical Composition of the Uterine Fibres in Pregnancy. By SIEGMUND.—The point of interest in this communication is, that kreatin was obtained from the tissue of the gravid uterus. Formic and acetic acids were also present.—*British and Foreign Medico-Chirurgical Review*, from *Wurzburg Gesell. Verhandl.*

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NOTICE TO CORRESPONDENTS.

Communications and Books for notice should be addressed to the Editors, care of Messrs. Lindsay & Blakiston.

Letters, &c., connected with the *business affairs* of the Journal should be addressed to the Publishers.

Papers for publication must be received *before* the 20th of the month, or they cannot appear in the forthcoming number.

The following Journals have been received in exchange:

American Journal of Medical Science. Jan., 1853.
Western Lancet. December.
New Orleans Monthly Medical Register.
Southern Journal of the Medical and Physical Sciences.
New Orleans Medical and Surgical Journal.
Medical Recorder.
Western Medico-Chirurgical Journal.
Union Journal of Medicine.
Medical News. Philadelphia.
Buffalo Journal.
New York Medical Gazette.
The Boston Medical and Surgical Journal. (Weekly.)
Stethoscope and Virginia Medical Gazette.
New Jersey Medical and Surgical Reporter.
Transylvania Medical Journal.
Southern Medical and Surgical Journal.
New Hampshire Journal of Medicine.
The London Lancet. (Weekly, London.)
The Medical Times and Gazette. (Weekly, London.)
Dublin Medical Press.
London Journal of Medicine.
Edinburgh Medical and Surgical Journal.
Journal of Psychological Medicine.
London Pharmaceutical Journal.
Edinburgh Monthly Journal.
Journal of Pharmacy.
North Western Medical Intelligencer.
American Journal of Insanity.

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BOOKS RECEIVED.

Clinical Private Book, in English and German. From Lindsay & Blakiston.
Löwig's Principles of Organic Chemistry. From Mr. A. Hart.
Lardner's Natural Philosophy From Messrs. Lea & Blanchard.
Gluge's Atlas of Histology. From the same.
Warrington's Obstetric Catechism. From Barrington & Haswell.

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The foreign correspondents of the Examiner will please direct their Exchanges and other communications to the care of Mr. Thos. Delf, No. 21 Paternoster Row, London, or Mr. H. Bossange, 21 Bis, Quai Voltaire, Paris.

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(Continued.)

XXV.—ON THE TREATMENT OF EPILEPSY.

I have made numerous experiments with regard to the treatment of this dreadful affection, and I intend to publish them, in extenso, when some points that are still obscure, have become clear to my mind. Here I will merely relate some of the most important results of my researches. As I have had the opportunity during the last three or four years of observing every day a great many animals (more than a hundred) which had a convulsive affection resembling epilepsy very much, I have been able to discover some very interesting facts, among which are the following:

1st. For each epileptic animal, the number of fits, in a given time, is generally in a direct proportion with the quantity of food taken.

2d. There is an inverse proportion between the amount of exercise and the number of fits.

3d. Cauterisation of the mucous membrane of the larynx is able either to cure or to relieve these epileptic animals.

The convulsive affection existing in almost all these animals was the consequence of a transversal section of a lateral half of the spinal cord, in the dorsal or in the lumbar region.

I have already published the results of my experiments on epilepsy, in my lectures before large classes of Physicians and Medical students, both in France in 1851 and in this country in 1852.

These results are in perfect accordance with the views of Dr. Marshall Hall in relation to epilepsy. As the views of this eminent biologist are generally known, I need not expose them, and I will merely remind my readers of the three following points:

1st. The first muscles that contract spasmodically in almost all, if not in all, the cases of epileptic fits, are those of the larynx and the neck: 2d, spasm of the glottis taking place then, produces suffocation, in consequence of which convulsions are produced in the trunk and the limbs; 3d, tracheotomy may prevent these convulsions by preventing suffocation, and it is known that in some cases tracheotomy has cured epilepsy.

It has been objected to Marshall Hall that in cases of poisoning by strychnine, convulsions take place even when a tracheal tube renders respiration perfectly free. This objection has no value, because the state of the spinal cord in epileptics is not the same as in men or animals poisoned by strychnine. Certainly the excitability of the spinal cord is greater in epileptics than in healthy persons, but the degree of excitability of that nervous centre is much greater in persons poisoned by strychnine than in epileptics; and, therefore, it is easy to understand that certain excitations are able to produce general convulsions in one case and not in the other.

If we give a very slight dose of strychnine to an animal, so as not to poison it, but merely to increase slightly the excitability of the spinal cord, there are no convulsions when we touch or pinch or burn the skin, but if we prevent breathing for a few seconds only, general convulsions take place, exactly as in epileptic men or animals.

It has been said also, in opposition to Marshall Hall, that a spasm of the glottis of the severest kind occurs in cases of hooping cough, of spasmodic croup and even of apoplexy, without the occurrence of any other convulsions. The answer to this objec-

tion is, that in epilepsy the spinal cord is more excitable than in these other diseases, so that the same kind of excitation does not produce the same effects.

A great many facts, that I will publish elsewhere, prove that black blood, very probably by its carbonic acid, is an excitant of the spinal cord and of the medulla oblongata. When, as is the case in asphyxia, the blood is not oxygenated and deprived of the carbonic acid constantly produced in it, or received by it from different tissues, then the excitation made on these nervous centres becomes so powerful that convulsions are produced. This is found in men and animals, even in perfect health. If the asphyxia is incomplete, convulsions are not produced, unless the excitability of the spinal cord is greater than usual, and this is the case in epileptics.

In November, 1851, at the *Ecole Pratique*, of Paris, I published for the first time, before a class of about forty young Physicians and Medical students, the results of my experiments as regards the cauterization of the larynx in epilepsy. About eight months after, Dr. Eben Watson published a paper* in which he says: "The treatment I would now propose instead of tracheotomy is simply the application of a solution of nitrate of silver, varying in strength with the requirements of the case, to the glottis of the patient, with the view of diminishing the nervous excitability of the part in question. A similar treatment has been found by me remarkably successful in alleviating and removing, in a short time, the susceptibility of the patient to laryngysmus, in cases of hooping cough, and of spasmodic croup (*laryngysmus stridulus*,) nor can I see any reason why a similar result should not ensue in chronic cases of epilepsy."

The reasons given by Dr. E. Watson are partly the same by which I had been led long before him to perform the operation he suggests. But I had also some other reasons. It is perfectly known, in the actual state of Medical Science, that the greatest changes may be produced in the nervous centres, as well as in the nerves, by a very strong excitation of the termination of the nervous fibres in the skin or the mucous membranes. On this principle are founded many modes of treatment of some dis-

* Remarks on Dr. M. Hall's theory of the relation of Laryngysmus to Epilepsy. In London Journal of Medicine, July, 1852, pp. 641–43.

eases of the spinal cord and of neuralgia. The application of caustics, blisters, cupping, hot iron, etc., is based on this principle. In accordance with it I am inclined to believe that epilepsy might be cured by a mere application of a hot iron to the skin of the neck; at least I have had two guinea-pigs cured after such an application, repeated three or four times.

The operation of tracheotomy proposed by Marshall Hall has proved successful in some cases. But it is a dangerous operation, and if it is proved that another one much slighter can produce the same good effects, it ought not to be practised.

That other operation is the cauterization of the larynx; it prevents the closure of the glottis, and thus is able to cure or to relieve epileptic patients as well as it cures some other diseases. Every learned physician knows that it is sufficient to cauterize the larynx once or twice to cure hooping cough in almost every case.

When the cause of the epileptic fits is excessive, and when the spinal cord is very excitable, to allow free breathing merely will not be sufficient to prevent the general convulsions. But their violence, if respiration is free, will be deprived of all the effect that would be produced by the excitation of black blood if breathing did not take place.

The distinction made between organic and inorganic epilepsy has not the importance that some writers seem to admit. There are alterations in the nervous system in both cases, and the only difference is that these alterations can be easily seen with the naked eye in one case and not in the other. I ought to point out that the cases of epilepsy in animals, which I have cured, were cases of organic epilepsy. These animals have been cured, although the apparent and primitive cause of the disease, *i. e.* a section of a lateral half of the spinal cord, continued to exist.

The cauterisation of the larynx on these animals was made every day, or every other day, and sometimes during two or three months. In some cases, the relief having been immediate, the cauterisation was made only twice a week. One of the animals experimented on was cured after three or four cauterisations; but the number of cauterisations necessary has been generally very much greater. When I left France in February, 1852, I had cured about a third of the animals treated by this

method; and all the others, except two or three, had been very much relieved, and certainly many of them would have been cured if the treatment had been prolonged.

I knew that an animal was cured, not only by the absence of spontaneous fits, but when I could not produce a fit by giving great pain. I had found that on any epileptic animal, except immediately after a paroxysm, I could very easily produce a fit by exciting pain and more particularly by pinching or burning the skin of the face or neck. So that I am authorised to believe that when a fit was not produced by pinching or burning the face, it was because epilepsy had ceased to exist.

Some Physicians in this country have already tried on man the mode of treatment that I have found so successful on animals. From what I know of the results of their attempt, it seems to me that man is like animals in this respect. There has not been yet a complete curation: but, except in one case, there has been a very considerable diminution in the frequency and the intensity of the fits.

As Physicians who have to treat epileptics, have not to make experiments, but to cure by making use of all the best means together, I think that the treatment of epilepsy ought not to consist merely of the cauterisation of the larynx. The plan of treatment I should suggest is the following:

1st. A cauterisation of the larynx with a strong solution of nitrate of silver, (at least 60 grains to the ounce,) every day, for at least five or six weeks.

2d. A cauterisation of the skin of the neck over the spine, with a hot iron, once a fortnight, for about two or three months.

3d. Exercise and gymnastics.

4th. Make use of oxide of zinc or ammoniated copper, remedies which a very respectable Physician of Geneva, (Switzerland,) Dr. Herpin, has found successful in many cases, when their dose has been considerable.*

5th. If in a fit of epilepsy, the suffocation is very considerable; the operation of tracheotomy ought then to be performed immediately.

* See his admirable work: *Du Pronostic et du Traitement de l'Epilepsie.* Paris, 1852. Ouvrage couronné par l'Institut de France.

XXVI. CURE OF EPILEPSY BY SECTION OF A NERVE.

It is a well known fact that epilepsy may be produced by injury to a nerve. Dr. John Cooke, in his Treatise on Nervous Diseases, says on this subject: "From the writings of Forestus, Van Swieten and Tissot, it appears that injury done to the nerves, or that a morbid state of them, has in many instances given occasion to epilepsy. In the *Edinburgh Medical Essays and Observ.*, a case is related of a violent epilepsy, which frequently occurred, which was produced by a hard cartilaginous substance, of the size of a large pea, situated upon a nerve. That this was the cause was evident, as the disease ceased on the extirpation of the tumor. In the same we have an account of epilepsy depending upon a calculus of an irregular figure, about the size of a nut, pressing on a branch of the sciatic nerve; and another in which the par vagum was compressed by a concretion of a similar kind." Darwin, in his *Zoonomia*, says, "I once saw a child about ten years old, who frequently fell down in convulsions, as she was running about in play. On examining, a wart was found on one ankle, which was ragged and inflamed, which was cut off, and the fits never recurred."

Van Swieten relates a case of curation of epilepsy by the extirpation of a hard cartilaginous body, somewhat larger than a pea, situated on a nerve of the leg.

A case is related in the *Medical and Physical Journal*, (vol. x. p. 52,) in which a cure of epilepsy was effected by the application of caustic to the nerve which accompanies the vena saphena.

Many other analogous cases are on record. Jacques Carron, (*Recueil périodique de la Soc. de Médecine de Paris*, t. xviii. p. 422,) cured a child by the extirpation of a small sebaceous tumor which existed on one of the fingers. Portal, (*Observations sur l'épilepsie*, Paris, 1827, p. 159,) cites a case observed by Fabos, in which the fits were preceded by a pain in one of the fingers. During a violent fit Fabos put a ligature around the radial nerve, and the patient was completely cured. Portal (*Anatomie Médicale*, vol. iv. p. 247,) relates that one of his pupils, Mr. Leduc, cured an epileptic by the extirpation of a hard tumor which was on one of the fingers. Joseph Frank

cured by castration a patient in whom epilepsy had appeared after an injury to the scrotum. Henricus ab Heer, cited by Sennert (*Opera omnia*, vol. ii. p. 489,) having observed that during her fits, a girl used to rub her two big toes, cured her by the application of caustic to these toes. Similar cases have been related by Alexander, of Tralles, and by Wepfer.

I have cured a guinea-pig of a very violent convulsive affection, much resembling epilepsy, by a section of the sciatic nerve. This animal had been bitten by another on the toes of one of the posterior limbs. A considerable slough appeared on the wounded part, and after two or three weeks fits appeared, and the animal shortly afterwards had many very violent fits every day. I laid bare the sciatic nerve and cut it transversely. After this operation I kept the animal many months, and never saw it have a fit. From this fact, and from those observed by many physicians above related, it appears clearly that in cases of epilepsy it is necessary to examine if there is no injury whatever to some nerve, and more particularly when the *aura epileptica* exists. If there is such an injury, the treatment ought to be either the section of th injured nerve or the removal of the tumor, if there is one, and sometimes the application of a caustic or a blister.

XXVI.—LAWS OF THE DYNAMICAL ACTIONS IN MAN AND ANIMALS.*

The following laws are based upon a very considerable number of facts which I have observed or found on record in many books, pamphlets and journals. I have collected these facts and I intend to publish them in a special paper.

I ought to say that many Physiologists, and more particularly Fontana, Delaroche, Adamucci, Broussais, Buchez, Réveillé-Parise, J. Mueller, J. Paget and Carpenter, have pointed out the existence of some parts of some of these laws.

1. Nervous actions, muscular contraction, contraction of the cellular tissue, the discharge of the electrical apparatus of some fishes, the galvanic current of certain organs, the galvanic dis-

* I ought to say that these laws and the facts upon which they are established, have been the subject of many communications that I have made to the *Société de Biologie*, at Paris, in the year 1848.

charge which accompanies the muscular contraction, and *probably* also the phosphorescence of certain animals and the ciliary movements, are phenomena which cannot exist without being attended with an organic waste which nutrition alone can provide for.

2. The faculty of originating these phenomena has a tendency to increase in direct ratio to the rapidity of the circulation of blood, to its abundance, and to the amount of its nutritive materials, both general and special.

3. During rest, *i. e.* at the time of the non-existence of these phenomena, the tendency of such a faculty towards augmentation meeting with no obstacle, augmentation actually takes place.

4. The increase is much more rapidly effected when an action has just been performed, than it is after a prolonged rest.

5. Nutrition becoming altered in the tissues which remain inactive for a long time, the faculty of producing the above-mentioned phenomena diminishes by degrees, and even finally disappears when the structure of the tissues has been deeply modified.

6. The faculty of originating these phenomena increases in direct ratio with the length of the rest, within certain limits; and when the latter are overleaped, there is a period when no change takes place; but afterwards the faculty decreases, on the contrary, in direct ratio with the length of the rest.

7. For many tissues which produce these phenomena a complete rest is scarcely possible. The phenomena take place, in appearance, spontaneously, and with as much energy as the temperature is higher.

8. The faculty of producing these phenomena decreases at the time they are going on, in proportion to their intensity and duration, and in inverse ratio to the nutritive reparation which simultaneously takes place.

9. Reparation thus incessantly supplying for expenditure, it is not possible, with regard to most of these phenomena, and as long as circulation goes on, to destroy entirely the faculty of originating them; or rather, as soon as we have succeeded in destroying that faculty, it is reproduced by nutrition.

10. Expenditure dependent upon action, being followed by a great activity in the nutrition, it happens that, if the action be

frequently renewed, there is an excess of nutrition and a considerable increase of the faculty of acting.

11. When the faculty of acting has been increased in virtue of the preceding reasons, within a certain limit, an equilibrium exists between the expenditure and the reparation, and the increase no longer takes place.

12. As it is possible for nutrition to take place in the tissues, although the nutritive fluid is not actually circulating in them, and provided that a certain amount of it exists in them, the faculty of acting may be increased in parts where circulation is stopped.

13. Although circulation and consequently reparation, are more active in summer than in winter time, at least in cold-blooded animals, the faculty of acting becomes more considerable in winter than in summer time, because the spontaneous expenditures abovementioned, and those due to external stimuli, or dependent upon the will, are by far less considerable.

All the preceding laws may be summed up in the following:

The intensity of the faculty which animal tissues possess, of producing the vital phenomena, seems to be in a direct ratio to the intensity and duration of the nutritive reparation, and in an inverse ratio to the intensity and duration of the existence of these phenomena.

CLINICAL REPORTS.

Pennsylvania College, Ninth below Locust street. Service of Professor GILBERT.

Reported by W. H. GOBRECHT, M. D.

Feb. 9th.—Abscess.—Thomas C——, (Case LXXVII.) The abscess is filling up, and as far as the injury is concerned, the patient is improving. The case, however, is complicated with slight anasarca in a strumous diathesis; for which is ordered:

℞. Pil. Hydrargyri No. ii.

To be followed by:

℞. Potassæ bi-tartrat. ʒiij.
Pulv. Jalapæ. ℈ij.
M. S. Take a teaspoonful every three hours until purgation results.

Case LXXXIII.—*Inverted toe-nail*, in Rachel B——, aged 15. Ingrowing nail occurs more frequently in the foot than in the hand, the great toe being oftenest affected. It is caused by the pressure of tight boots or shoes upon the soft parts of the toes, forcing them up against the edges of the nail, thus burying it in their substance. The pressure thus produced by the edge or edges of the nail, causes inflammation and ulceration, and finally painful granulations arise, which overlie it, besides being impinged on by its edge, giving rise to so much pain that locomotion can not be performed. Moreover, these ulcerations may assume a cancerous character, if long neglected.

In treating inverted toe-nail, loose shoes should be ordered, and if the case be mild it may be cured, or at least much palliated, by gently stuffing cotton beneath the sharp edge of the nail to relieve its pressure, and applying caustic to the exuberant granulations. In bad cases, however, we can only cure by taking either the affected side or the whole of the nail away.

The patient presented had inversion of both lateral edges of the left great toe-nail, with ulceration and exuberant granulations about them.

It was removed according to the method of Dupuytren, that is, by introducing one blade of the sharp pointed scissors beneath the anterior edge of the nail at its centre, keeping close to it and passing down to the matrix. The blades being brought together and the nail divided, each half was wrenched from its bed by strong forceps. The ulcer remaining was dressed with Simple Cerate. This very painful operation was performed during partial Anæsthesia, induced by the inhalation of a mixture of Chloroform and Ether.

Double Cataract.—Margaret G——, (Case LXXII.) This patient is still improving. She sees faces but cannot distinguish them well. Pupil dilated in the presence of class with aqueous solution of Atropia.

16th. As this patient is anxious to return to her home in the country, it is thought proper to furnish her with a cataract glass, which is much more convex than those usually employed as spectacles, and is intended as a substitute for the absorbed lens. A number of such were presented, from which that best fitted to the peculiarities of her eye was selected, and by means of which she was enabled to see quite distinctly. She was directed not to use this for six or seven months to come, to avoid irritation and inflammation, or other changes of the retina, from the unaccustomed concentration of light upon its surface, which might result in the production of amaurosis.

Case LXXXIV. *Hare lip with cleft palate.*—Rebecca ——, aged 22. In this case very great deformity exists; the lip is not only deficient, but the cleft extends through the left superior maxillary and palate bones, whilst the aveolar processes and several teeth project at its anterior extremity, giving the patient an exceedingly unpleasant appearance, and materially affecting her powers of eating and speaking.

Besides the very great congenital deficiency of material to work with here, it is stated that an unsuccessful operation for relief had been previously performed; large cicatrices of a firm, fibrous character resulting.

The frœna existing on both sides of the fissure were detached, and the left side of the lip and ala of the nose freely dissected from the superior maxilla; a small wooden spatula was then placed successively beneath each margin of the cleft in the soft parts, upon which the fibrous edges were fully cut away by a sharp scalpel, the incisions being made concave to the fissure to ensure a horizontal margin to the new lip, which was then formed by the apposition of the cut edges by means of two large gold needles in the substance of the lip, and one smaller, just at its edge, the twisted suture being formed about them.

A broad adhesive plaster was then applied to each cheek as far back as the ear; each anterior extremity extending to the oral angle of its own side, was doubled upon itself, (thus forming a thick edge,) and connected with its fellow of the opposite side by ligatures passing between them; these ligatures being drawn

tightly, the tension of the buccinator and other muscles of the cheeks was effectually controlled.

16th. The small needle was removed on the third, and both the largest at the end of the fourth, whilst the threads adhered until the fifth day.

To-day, on completely redressing, adhesion is found perfect in nearly every part, though granulation must occur at some points. Isinglass plaster was applied directly over the wound to defend the new material from the action of foreign matters; adhesive strips, similar to those previously employed, were used in a like manner; whilst pressure of the connecting threads upon the lip was prevented by placing a roll of lint beneath the anterior extremity of each strip.

Feb. 12th. Spinal Irritation.—Robert C——, (Case LXVII.) Has had no spasm since his last appearance here.

Whenever an extra veratria pill is taken, the tingling sensation, indicative of its action, results. The patient is evidently improving. The veratria is discontinued, to be resumed if necessary.

Case LXXXV. *Lumbago.*—Hugh L——, aged 21, boatman, presented himself as a surgical patient, but is discovered to have lumbago only, for which is prescribed:

℞	Potassii Iodidi,	ʒi.
	Vini Colchici Sem.	fʒi.
	Aquæ Menthæ virid.	fʒii.

M. S. A tea spoonful thrice daily, ceasing when it purges.

Porrigo.—Christiana S——, (Case LXXVII.) Improving under treatment.

Case LXXXVI. *Porrigo.*—Francis S——, aged 10. The disease in this case appeared at the eleventh month, just after vaccination, the mother attributing it to the use of improper virus in the operation; this is, however, doubtless an error. The affection has continued up to this time, and during the course of it, ophthalmia tarsi, which is a chronic inflammation of the edges of the lids, extending into the Meibomean follicles, from which a viscid abnormal secretion results, has arisen. The

mother states that every variety of treatment has been employed, with low diet. There is prescribed free exercise in the open air, warm salt bath, followed by frictions with a coarse towel, and full diet; also,

℞. Hydrarg. oxid. rubr. gr. x.
Cerat. simp. ʒi.
M. ft. ung.
S. To be applied to the edges of the lids nightly.

Case LXXXVII. *Supposed polypus nasi.*—Mr. L——, aged 41, has been troubled for five or six years with a gradually increasing stoppage of the left nostril, attended by an alteration of the voice, and a polypus apparently existed upon the septum narium on the left side, an unusual spot for its development. On the application of the forceps, however, enlargement of the mucous membrane and periosteum were found to exist, but no polypi.

Case LXXXVIII. *Strabismus.*—Caroline F——, aged 6, has convergent strabismus of the right eye. It was stated that, in cases of such an age, surgical attempts at relief were perhaps of doubtful propriety, inasmuch as although the patient would be perfectly willing to enter into the operation, the subsequent struggles might be very embarrassing. The anxiety, however, of the parents for its cure, led the Surgeon to the performance of the operation, which was done in the usual manner, and with entire success, although, as expected, the struggles of the child were exceedingly annoying.

Case LXXXIX. *Inflammation of the Hand.*—Martha K——, aged 20, being affected with tetter, was recommended by her friends to apply corrosive sublimate made into an ointment with butter, which she did on the 8th inst. The quantity employed was large, and its application was followed by intense pain, swelling, redness and loss of sleep from the irritation set up, which has lasted, although now abating, to the present time.

The case is shown as an example of the results following the injudicious appliance of remedial means on popular recommendation.

A poultice was ordered as the only treatment necessary.

Feb. 16th. (Case LXXV.) *Amaurosis.*—Albion D. S——. Reported as recovering vision rapidly.

19th.—Can now see with both eyes, though least with the right. The Iritis which existed in it is yielding rapidly and is almost subdued. The calomel powders are continued with occasional purgation.

The patient is informed that he must change his occupation to one requiring less stooping, since this aids in the production of congestion of the head, caused also by holding the breath during the exertion of hauling upon ropes, which he must pursue as a boatman and oyster dredger.

Case XC.—*Congenital double Inguinal Hernia,* occurring in James B——, aged 5 months.

Remarks upon the pathology of this disease were given, and a double truss applied, which is to be worn for three or four months.

23d.—Truss removed and re-applied; child doing very well.

Case XCI. *Subacute Conjunctivitis.*—John H——, aged 33, was seized with inflammation of the eyes, about two weeks since, and this has now assumed the subacute form. The conjunctivæ alone are involved. Besides local treatment, his digestive organs require correction.

His tongue being enlarged, with a white coat upon it, appetite poor, and the bowels somewhat constipated, ordered

℞. Mass. Pil. Hydrarg. ℈j.
Pulv. Aloes ℈ss.
Pulv. Rhei ℈ss.

M. ft. in pil., No. X.

S. Three to be taken at bed time. The others as required.

If the three pills do not move the bowels, a seidlitz powder is to be taken the next morning.

As a local application to the eye,

℞. Zinci Chloridi gr. ss.
Aq. Rosæ f℥j.

M.

S. Apply to conjunctivæ once a day.

Case XCII. *Parotitis.*—Wm. S——, printer, aged 22. The swelling of the left parotid gland commenced on the 13th inst., since which time it has been increasing in size, being hard and painful. He is directed to apply linim. ammoniæ to the part, to be purged freely with magnes. sulphat., and to be restricted in diet.

Case XCIII. *Epiphora.*—James P——, aged 44. This results from obstruction in the nasal duct. Creasote is painted over the lachrymal sac and the course of the duct as far as practicable.

Feb. 23*d.* Case XCIV. *Fracture at and Luxation of right elbow joint.*—Thos. McG——, aged 7. The injury was sustained by this patient 23 days since, and 16 days after its occurrence he appeared for treatment, when the right fore-arm was found rigidly extended; the coronoid process was fractured and drawn up on the arm anteriorly, whilst the olecranon was drawn upward posteriorly, the ulna of course following it. The fore-arm was first drawn downward by means of extension and counter-extension, and then flexed; the parts being thus properly adjusted were retained in position by a splint with a movable angle, controlled by a Stromeyer's screw, at the elbow, applied on the anterior aspect of the limb.

The following sedative lotion was ordered to be applied to the joint by wetted cloths.

℞. Plumbi Acetat. ʒij.
Morphiæ Acetat. gr. x.
Aquæ Oj.
M. ft. lot.

The angle of the splint, after some little time has elapsed, to be changed frequently, but gently and gradually, and if anchylosis seems inevitable, it is to be allowed in the flexed position only, since the arm is not then useless, as it is if rigidly extended.

In concluding this series of reports, the history of a case presented to the class on Dec. 11th, 1852, will be given, as omitted at that time.

Dec. 11*th.* CASE XCV. *Hydrocele of the Neck.*—Mrs. M——, aged 50, is presented, with a large tumor, of 18 years' growth, involving the entire anterior and lower portion of the neck; on examination this is found to project downward behind the sternum, to either side beneath the sterno-cleido mastoidei muscles, and upward as high as the upper edge of the thyroid cartilage. It would thus involve important structures, and might arise from several causes; our diagnosis must therefore be accurate. It is found to have pulsation and thrill, but this doubtless arises from overlying the carotid arteries, inasmuch as when the tumor is pressed away, the vessel of the relieved side can be distinctly felt, whilst no thrill and but very indistinct pulsation is communicated to that portion of the tumor. This also occurs when the other side is examined, besides which we cannot either diminish the size or empty it by pressure; it is therefore not an aneurism. It is not bronchocele, for its history tells us that it commenced in the median line and in the lower part of the neck. Now, had it been bronchocele, the lobes of the thyroid body would in all probability have been first affected, and this higher up than the present disease commenced; besides which, goitre is usually hard, whilst this is soft, especially upon the left side, and fluctuation is very evident upon palpation. It is, therefore, doubtless filled with fluid, (which so readily transmits the impulse of the vessels to the fingers,) and is a hydrocele,—a cyst,—whose contents are increasing, since they are secreted more rapidly than absorption is performed. Such tumors are generally located beneath the platysma myoides m., and upon the larynx. The removal of this tumor or the diminution of its size is important, since, being of 18 years' standing, it is large, and now increases rapidly, producing great deformity, whilst it presses on the trachea, keeping up a chronic congestion of the air passages, rendering breathing difficult, and thus, especially during the summer, rendering the slightest forms of labor very difficult for her performance.

On account of the size of this tumor, and the number of important parts involved, the operation here indicated would be exploratory in its character, the fluid would then be withdrawn, and if the sac was in a proper state, iodine injection would be

resorted to, with the intention of producing adhesion between its walls.

This patient, as previously stated, will present herself in future for operation.

BIBLIOGRAPHICAL NOTICES.

A System of Practical Surgery. By WILLIAM FERGUSSON, F.R.S., Professor of Surgery in King's College, London; Surgeon to King's College Hospital; and Surgeon to H. R. H. Prince Albert. Fourth American, from the third and enlarged London edition. *With three hundred and ninety-three illustrations.* Philadelphia: Blanchard & Lea, 1853. 8vo. pp. 621, including index.

The fact that since its first appearance, ten years ago, the Practical Surgery of Prof. Fergusson has reached a third London and fourth American edition, affords abundant evidence of the great esteem in which it has been held on both sides of the Atlantic. The reputation of its author, as well as of the work itself, have been too long and too favorably familiar to our readers to require any detailed notice of the many new and strong claims upon their attention accumulated in the edition just presented to us. The marks of progress may be noted not only in the additional illustrations, of which there are over a hundred, but in the better arrangement as well as enlargement of several chapters, the discussion of recent improvements, and the consideration of many topics which were not alluded to or very slightly touched upon in previous editions. The nature and variety of these additions, however, must render it of course impracticable to dwell upon them here; and the best we can do for the book itself, as well as for our readers, is to recommend all who desire one of the most instructive manuals of practical surgery, to provide themselves at once with copies for their private reading. Meanwhile it may not be amiss to extract two passages from different portions of the book, which

are interesting in themselves, and will serve to show the determination of the author to keep pace fully with the progress of the times. The first relates to the use of anæsthetics, and especially of chloroform, in operations. On this topic he remarks in conclusion:

"While the custom of rendering patients insensible to pain, during the performance of surgical operations, has rapidly gained an undoubted and sure position, there have been various questions and drawbacks regarding it, many of which are, even at the present day, of great practical importance. Several deaths have occurred, to all appearance directly from the anæsthetic agents, or the mode of their administration, and there has been much discussion on both these points. In the early application of ether, a complicated apparatus was used, but soon it was found that by holding over the patient's nostrils and mouth, a handkerchief, napkin or piece of sponge, moistened with a few drops of the anæsthetic, the desired effect was speedily produced, and to this day, perhaps the majority of those who use the agent are content with this mode of administering it. From the commencement it has been the custom of most surgeons in large operating practice, to have the agent administered by some one whose sole attention might be given to its physiological effects on the patient during the performance of the operation; and among those who have performed this most important duty, there are few so extensively experienced as Dr. Snow. This gentleman, who is justly deemed our highest authority on the subject of anæsthesia in surgical operations, is in the habit of using an apparatus, as he is of opinion that there is less danger and more certainty thereby than with a napkin. There are different views on this subject, however, which need not be discussed here, and it may be sufficient to say that in whatever way the agent is called into use, its powers are fraught with subtle and imminent danger, unless the greatest caution be taken. For my own part I think it of little consequence by what means the agent is administered, provided there be a fair proportion of atmospheric air admitted to the lungs at the same time, or that there be the facility of admitting it, when the influence of the chloroform, or whatever agent is employed, seems too powerful.

"At one time it was supposed that certain states of the constitution, certain conditions of the disease, or affections of certain organs, must preclude anæsthesia in surgical operations, but experience has shown that these fears have all been groundless. The age of a patient forms no objection to its use, for it may be given during the first few weeks of life, or at the latest imaginable date. Nor does it appear that positive disease of any organ forms an insuperable objection to its use. There are certain circumstances in the state of the constitution which will deter the surgeon from performing any important surgical operation, and in such instances the propriety of anæsthesia need never be discussed; but as a general answer to all questions on this score, I am disposed to say, that in whatever case a surgeon may consider an operation

justifiable, the use of chloroform (this is named as the agent in most common use) is equally justifiable. If the operation be of minor importance, and of momentary duration, especially if the patient be courageous, and perhaps adverse to the practice, the surgeon need say little on the subject; but in all cases where much and protracted suffering is likely, chloroform should be recommended. It will not only save pain, but avert shock, and, provided the agent be properly administered, it will render the surgeon's duties more easy of accomplishment. There are few operations in which its use is not admissible and advantageous. In operations for cataract, especially by extraction, it is likely to prove injurious; as there is no certainty as to the movements of the eyeball and lids for some time after. I have used chloroform for removal of tonsils, in young persons, but the operation is difficult, and if the patient will keep steady otherwise, it had better not be used. In staphyloraphy the co-operation of the patient is so essential, that I deem chloroform inadmissible. It has been supposed that there is danger from blood trickling into the larynx and trachea in operations under chloroform. In one instance, in the early days of chloroform, I took some alarm on this score, in a case where blood was trickling from the posterior nares into the trachea and causing cough, but I feel now certain that there was no just cause of apprehension. I have since repeatedly removed both upper and lower jaw, and done many other operations involving considerable hemorrhage towards the throat, but have never seen any more inconvenience from such a cause than if chloroform had not been used. It has happened repeatedly in former times, that persons have died during the performance of operations. Mental emotions, shock, hemorrhage, have each and all had their influence; but, notwithstanding the various instances in which death has happened under chloroform, it may be doubted if sudden death, during operation, has occurred so frequently since the introduction of anæsthesia, as prior to that date. In my own experience I have twice seen patients under chloroform in great jeopardy—one of these had a protracted operation performed for resection of a joint, and possibly a similar state of prostration might have resulted without the use of this agent. In the other instance, tracheotomy was required for disease of the larynx, and under the chloroform, respiration became so slow and difficult, that it was feared the patient would die on the instant, before the operation could be executed. When the trachea was opened, he immediately breathed more freely, and speedily rallied from his alarming condition.

"I was certainly more impressed with the danger in this instance than in any other that I had seen; but Dr. Snow, who administered the chloroform, did not participate in my fears. The immediate effect of tracheotomy corroborates the view entertained by Ricord and others, that this proceeding may be resorted to with advantage when there seems danger from chloroform. When death has occurred seemingly from this agent, it has been immediate, and chloroform leaves the system so speedily, that if the patient has once become conscious, I doubt if death could ever be attributed to this cause. Chloroform has no influence whatever, either in retarding or accelerating the healing of a wound.

We have no statistical data on this subject, but altogether the impression on my mind is, that a patient is better off with chloroform both under and after an operation, than if he were without it. When an operation is contemplated under chloroform, almost the only precaution worthy of being taken is, that food should be avoided for several hours before, as chloroform on a full stomach is almost certain to induce sickness. So much has been written on the subject of chloroform since its introduction, that I deem it unnecessary to say much more regarding it at present, and I trust from what has been stated, that it will be understood that, with the few exceptions above made, and such others as might incidentally arise, the use of this agent is recommended as an invariable accompaniment of all surgical operations involving pain.

"The quantity of chloroform required for different patients is very variable. A few drops may suffice for some, while drachms may be needful for others, and generally the amount will be in proportion to the duration of the operation. Some persons take it kindly, even greedily, others make great objection and resistance to its use, both while conscious and unconscious, but all can be at last so thoroughly overpowered by its influence, that, compatible with respiration and circulation, the greatest imaginable quietness can be obtained. There is very little effect on the pulse in such cases; sometimes it is slightly excited at first, and if the dose be very potent, it may become slow and weak. There is greater effect on respiration. In some, in the early stages, the movements are rapid, and there seems an eagerness to fill the lungs with the vapor. In others, a tickling cough is excited. In many the full effect is induced with as slight a perceptible change as if sleep had suddenly come on, but in many others great irregularity in the respiratory movements ensues, and much cerebral excitement is induced. Rapid breathing may happen, as already mentioned, but the reverse may be the case, and the power of inspiration may suddenly seem to have ceased. For many seconds there may be no seeming attempt at respiration, but at last a deep breath is usually taken, which makes amends for the previous cessation. The cerebral excitement is evinced by crying, bawling, singing, laughing, incoherent talking, and with many there seems some prevailing idea which calls forth unusual and often great muscular action. Some strike forcibly with their fists, and with no seeming want of skill; others use their lower extremities, and others again make such violent general struggles as necessitate the greatest muscular exertion in those around to keep them steady. Often these violent struggles and the temporary cessation of respiration fall together, and to those not accustomed to such scenes, it appears as if immediate dissolution were impending; but in all such cases a little more of the vapor induces all that quietude which is characteristic of its full effect for the surgeon's purposes. There are various ways in which it may be decided that this period has arrived. Muscular relaxation is one of the best, but perhaps there is no test equal to that of touching the surface of the eyeball with the point of the finger. If there be any indication of feeling, the proper time has not arrived; if the contrary, then the surgeon may proceed. The agent must be admi-

nistered during the operation as may seem necessary, and it is best to continue its influence until all risk of pain, at the time of operation or dressing, has passed. In most instances it is highly desirable that the patient should be placed in bed before awaking from his anæsthetic trance. In many cases much mental and bodily suffering may be avoided by administering the chloroform before the patient is moved from bed. In painful diseases of joints, such as of the knee, there is often great suffering in carrying the patient to the operating table, which may, however, be avoided by using chloroform before he is disturbed. Some patients become conscious in a few minutes after the surgeon has ceased his work, while others remain for a longer period as if in calm sleep. In certain instances headache and general uneasiness are complained of for hours or even days after chloroform; but in the majority of cases the effects are slightly if at all felt when consciousness returns." (pp. 33—35.)

The second extract contains his appreciation of the treatment of aneurism by compression.

"So far as our comparatively limited experience in the method by pressure, as followed by the Dublin surgeons, will enable us to form an estimate of its value, it seems in many respects, if not in all, preferable to that by deligation of the main artery; and there seems these great advantages in it, that if it does not act satisfactorily, the Hunterian operation may still be resorted to, with as much probability of success as ever, while by its application none of those formidable dangers are incurred, which are the well known consequences of the application of the ligature. The difficulties and immediate dangers of a cutting operation are avoided. It may seem strange to make use of such language in the present day, as applicable to ligature of the superficial femoral artery—for that I assume to be the vessel meant by the unfortunately vague term of 'femoral;' nevertheless when it is known that great difficulties have been experienced in such a proceeding, even by hospital surgeons and teachers of surgery, and that the accompanying great vein has been wounded by different operators, the facts cannot be overlooked. Mr. Syme states in the Edinburgh Monthly Journal of Medical Science for November, 1851, that he has tied the superficial femoral artery twenty times without a fatal issue, and with perfect success, and both he and his patients may be congratulated on such satisfactory results; but the Tables above referred to show no such average success; and when it is borne in mind that the attempt at cure by pressure does not preclude the resource of the ligature, it seems to me that with the ample evidence before us of the great success which has attended the modern practice by this means, the surgeon should undoubtedly give it a trial ere he resorts to the knife. Unquestionably the evil result of the Hunterian operation, in regard to ligature of the superficial femoral artery, has in many instances resulted from the defective or injurious style of operation, but the same may be said of certain examples where pressure has failed. Granting both of these

statements to be correct, it cannot be overlooked that ligature of the superficial femoral artery, done to the perfection of human skill, has nevertheless been followed with the worst possible results. I have seen Mr. Syme perform the operation repeatedly with admirable skill and precision in all points, and the results have been all that could be desired; but I have seen many others, and among them I may name the late Mr. Liston, perform the same operation, with an equal amount of tact and judgment, yet the results have been very different. With pressure, surgery has still further resources, but with the ligature the fate of the case is, for a time, placed almost, if not quite, beyond human power; and doubtless the surgeons of Dublin who have resorted to this practice (many of whom stand among the highest of those who have graced the annals of the profession) have duly considered all these points." (p. 128.)

Atlas of Pathological Histology. By Dr. GOTLEIB GLUGE, Professor of Physiology and Pathological Anatomy in the University of Bruxelles, &c. Translated from the German by JOSEPH LEIDY, M. D., Pathologist to St. Joseph's Hospital, &c. *With three hundred and twenty figures, plain and colored, and twelve copper-plate engravings.* Philadelphia, Blanchard & Lea, 1853.

The student of pathological anatomy will not fail to recognize the name of Gluge, as one of the most industrious contributors to this department of medical science, and those familiar with his great work will also see, as an old friend, the present work originally appended to it.

Extending over only one hundred pages, it fulfils its title of *Atlas* in all particulars. The introduction occupying sixteen pages, gives us valuable tables of the magnitude and weight of the organs of man, in the normal and abnormal conditions.

A few introductory remarks on pathological histology open the division of the work devoted to this subject. It is divided into seven sections, each of which is clearly but succinctly expressed.

Section 1st treats of the development of the elements of tissues, and includes: 1, elements of tissues; 2, development of cells in the extended plasma of capillary vessels, in which the different modes of cell formation are treated of, and the paral-

lelism between the pathological and physiological developments shown, together with the development of fibres.

Section II is entitled, "The elements of the tissues combined in perfect or imperfect tissues, and arranged according to the process of disease." It treats of the tissues and elements of the tissues in an imperfect condition of development; cytoblastema nucleoli, nuclei and cells. Of transition forms to perfect tissues. Of perfect tissues.

Section III treats of the formation of the blastema, the sources from whence the plastic substance is derived which forms the material for the development of the new tissues: these are, according to the author, nutrition, secretion and inflammation.

The different stages of inflammation are spoken of under the heads of congestion, hyperæmia, stasis, exudation and gangrene; each of which has a short section to itself; the formation, diagnosis, and chemical relation of pus, receiving a full share of notice.

Section IV is upon the histological metamorphosis of the blood, interior and exterior to the vessels.

Section V is devoted to the subject of pyæmia, and is illustrated by numerous observations.

Section VI is on gangrene, which it treats briefly.

Section VII contains observations on histology, illustrative of the various subjects treated in the preceding pages.

Next follows twelve well executed steel plates, containing three hundred and twenty figures in the best style of the art, with the explanation of each. Although there are many points where the author differs from standard authorities, yet, upon the whole, we are pleased with the book, and recommend it to all our readers who may be interested in this department. That it is entirely reliable, we cannot say, and by itself can do very little good or harm. No one will be satisfied with it alone, and a very slender acquaintance with other authorities will correct the errors of this. The translator has had many difficulties to encounter in rendering it into English, but he has performed his task creditably, and his few additions enhance the value of the work.

Handbooks of Natural Philosophy and Astronomy. By DIONYSIUS LARDNER, D. C. L., &c., &c. *Second Course. Heat, Magnetism, Common Electricity and Voltaic Electricity. Illustrated by upwards of two hundred engravings on wood.* pp. 451. Philadelphia, Blanchard & Lea, 1853.

The name of Dr. Lardner has long been known to the scientific world as one of the best of English writers on the various departments of the Physical Sciences. His treatises on the Steam Engine, and on other branches of physics, have for years been familiar in our schools and colleges as standard authorities.

The handbooks of Natural Philosophy and Astronomy, which are now in course of re-publication in this country, are designed by their author more especially for students of the different professions, for the artisan, and, in fine, for those who are already engaged in the active callings of life, but who desire to sustain and improve their knowledge of the general truths of physical science. They will be found admirably adapted to promote this end, by imparting, in a very clear style, a due amount of information without pursuing them through their mathematical details.

The study of the physical sciences form a part of every extended system of modern education. To the medical man, however, it is presented with peculiar claims to attention, since so many of the functions of the living body, and so many of the appliances which his art has suggested as remedial agents in disease, belong strictly to the domain of physics.

The present treatise is a most complete digest of all that has been developed in relation to the great forces of nature—Heat, Magnetism and Electricity. Their laws are elucidated in a manner both pleasing and familiar, and at the same time perfectly intelligible to the student. The illustrations are sufficiently numerous and appropriate; and altogether we can cordially recommend the work as well deserving the notice both of the practising physician and the student of medicine.

THE MEDICAL EXAMINER.

PHILADELPHIA, APRIL, 1853.

DEATH OF PROFESSOR HORNER.

Dr. WILLIAM E. HORNER, Professor of Anatomy in the University of Pennsylvania, died at his residence in this city on the 13th of March last, in the 60th year of his age. His death, though somewhat sudden, was anticipated by his friends and family for some weeks; and, indeed, for many years, we believe, it had been apparent that organic disease was making slow but sure inroads on his naturally vigorous constitution.

No death, in the profession of this country, could have excited a more general sensation than that of Dr. Horner. Connected for thirty-three years with the University of Pennsylvania, as the adjunct and successor of Physick, he stood in the foremost rank among our teachers of national reputation; while he was no less widely known as the author of a Treatise on Special Anatomy and Histology, as a constant contributor to our periodical medical literature, and as a skilful, original, and successful surgeon.

Dr. Horner was born on the 31st of June, 1793, at Warrenton, in Fauquier county, Virginia, where he received his early education. He afterwards spent some time in an Academy, at Dumfries, in Prince William County, in the same State, where he remained till his seventeenth year.

In 1810, he commenced the study of medicine with Dr. John Spence, of Dumfries, a Scotch physician and graduate of Edinburgh, who enjoyed considerable reputation as a practitioner.

In the autumn of 1812, he attended his first course of lectures in the University of Pennsylvania, and soon evinced his predilection for the study of anatomy, being occasionally employed in assisting the Demonstrator of Anatomy in the preparation of Prof. Wistar's lecture.

On the 3d of July, 1813, he obtained a commission as Surgeon's Mate in the Army of the United States; and was appointed to the regiment stationed at Fort Mifflin, near Philadelphia.

In the Spring of 1814, he graduated at the University, having presented an Inaugural Essay on Gunshot Wounds. He was ordered, in the Summer of this year, to the Niagara frontier, and was actively employed at Buffalo, Niagara, and Fort Erie. Our readers are familiar

with his spirited and instructive reminiscences of this campaign, published in late numbers of the Examiner.

After the peace, in 1815, he was stationed at Norfolk, but he soon after resigned his commission, and returned to his native town, Warrenton, Virginia, where he entered upon the practice of his profession. It was not long, however, before he decided to seek a wider sphere, and, in November of the same year, he settled permanently in Philadelphia.

Dr. Horner's advancement here was almost without a precedent in rapidity. A stranger, without interest or influence, within two years from his establishment in Philadelphia, he entered the University as Demonstrator of Anatomy, under the most distinguished of American teachers; and three years afterwards, (in 1820,) he was appointed adjunct Professor of the same branch. In 1831, on the resignation of Dr. Physick, he was elected Professor of Anatomy in the University, and discharged the duties of this chair till within a short period of his death. From the date of his appointment to the adjunct Professorship, he devoted himself to the formation of an anatomical cabinet, which has gradually become one of the most splendid and complete in the world.

As a lecturer on anatomy, Dr. Horner was distinguished for clearness, perspicuity, and simplicity of style, a thorough familiarity with his subject, which secured entirely the confidence and attention of his hearers, and a manly, unaffected delivery. As a *teacher* he had no superior, (as we can bear grateful testimony.) To oratorical talent he made no pretensions, and had no claims.

Though up to a short period of his death, Dr. Horner continued in the steady discharge of his professional and other duties, he had for years suffered from dyspnœa, palpitation, and other symptoms, which left little doubt that he labored under cardiac disorder; and the emaciation of his frame made it evident that it was producing serious derangement of the functions of nutrition. For some weeks preceding his death, dropsical effusion had appeared. And, though within a day or two of his death, he was able to participate in the examination of students for degrees, yet we believe that neither himself nor his family entertained any hope that his life could be long protracted. The immediate termination, was, however, somewhat unexpected.

The *post-mortem* examination confirmed the diagnosis of disease of the heart. It was found very considerably hypertrophied and enlarged, being five and a half inches from the apex to the origin of the pulmonary artery, five and three-quarter inches in diameter, and thirteen and a half inches in circumference at its base. The tricuspid and mitral

valves were healthy. The arch of the aorta was dilated and thickly ossified. There was also recent peritonitis, with streaks of fresh coagulable lymph over the peritoneal surface of the intestines. Perforation of the stomach or bowels had been suspected, as the cause of the peritonitis, but no traces of this lesion were found.

Dr. Horner's death, at this comparatively early age, is a loss which the profession of our country feel severely. As an anatomist and surgeon, the worthy successor of an illustrious predecessor, his place must long be vacant. But if not full of years, he went full of honors, leaving an unstained reputation in every personal and professional relation. It is gratifying too, to know, that his labors were not without that rare professional recompense—an ample fortune, which he owed exclusively to his own exertions. No man could have closed life under more consolations; and that greatest and best of consolations, a firm Christian hope, had been long and well secured.

St. Joseph's Hospital, *March 17th*, 1853.

At a Special Meeting of the Medical Board of St. Joseph's Hospital, held this day, for the purpose of taking action in regard to the death of their late President, William E. Horner, M. D., who departed this life on the 11th inst, it was unanimously

Resolved, That in Dr. Horner this Board have to lament one of the founders of the Hospital, a zealous and efficient advocate of its interests, and one of its most liberal benefactors, who spared neither his means, his labor, nor his skill, in furthering its welfare and in healing the diseases of its inmates; that in him they also mourn a colleague and a friend, who in all his intercourse was urbane and considerate, and ever prompt to sustain them by his influence and assist them by his counsel; one with whom it was a pleasure to associate and from whose exemplary candor they could always look for a just appreciation of their own acts.

Resolved, That a copy of this Resolution be furnished for publication in the Medical Examiner and the American Journal of the Medical Sciences. Alfred Stillé, Chairman.

J. Henry Smaltz, Secretary.

THE LATE DR. DANIEL DRAKE.

From a very interesting and eloquent Discourse on the Life, Character, and Services of Dr. Daniel Drake, by Prof. Gross, published in the February number of the *Western Journal of Medicine and Surgery*, we take the following particulars.

Dr. Drake was born at Plainfield, Essex County, New Jersey, on the

20th October, 1785. Two years and a half afterwards, his father emigrated to Kentucky, and settled at Mays Lick, twelve miles south-west of Maysville. The educational advantages of young Drake, during his boyhood, were very limited. In the autumn of 1800, at the close of his fifteenth year, he was sent to Cincinnati, and entered the office of Dr. Goforth, of that city, as a private pupil. He remained with this gentleman for four years, when he received from him an autograph diploma, under the sanction of which he practiced medicine for the next eleven years, "when it was corroborated by another from the University of Pennsylvania." In the autumn of 1805, he attended a course of lectures at the latter Institution, under Rush, Wistar, Barton, Physick, and Woodhouse. On his return, he practised medicine a year in Mason County, Kentucky, but soon afterwards went to Cincinnati. In 1807, he married; and after some years of professional occupation in Cincinnati, he, in 1815, attended a second course of lectures at the University of Pennsylvania, and graduated at the end of the session.

Dr. Drake's long and varied career, as a teacher of medicine, now commenced. A year after receiving his degree, he was appointed Professor of Materia Medica in the Medical Department of Transylvania University at Lexington. In 1819, he founded the Medical College of Ohio, at Cincinnati, he himself taking the Chair of Medicine. Misunderstandings with colleagues, however, resulted in Dr. Drake's retirement from this School; and in 1823, he resumed his old chair at Transylvania, passing two years later to the Chair of Medicine.

In 1827, Dr. Drake returned to Cincinnati and private practice. But, in 1830, he was called to the Professorship of Medicine in the Jefferson Medical College of Philadephia, where, according to Dr. Gross, he soon became the most popular Professor in the Institution, which then numbered both George McClellan and Eberle in its faculty. "Had Dr. Drake remained in the Jefferson School, no one can doubt," Dr. Gross. observes, "that the brilliant success which has since awaited it would have been attained years before." But the restless energy of Dr. Drake's character impelled him to new schemes, and he returned to the West; and, after two unsuccessful attempts at medical organizations, in 1835, we find him at the head of a new and able Institution, with brilliant prospects—the Cincinnati Medical College. Dr. Drake, it appears, had greatly at heart the success of this enterprise. But after a brave struggle of four years, with classes of encouraging numbers, this organization was obliged to "succumb to the want of endowment."

Shortly after, he received an invitation to a chair, created with especial reference to him, in the University of Louisville, viz.: that of

Clinical Medicine and Pathological Anatomy. He filled this chair till 1844, when he was transferred to that of Medicine. In 1849, he withdrew from Louisville, and returned to Cincinnati to fill the chair of Medicine in the Medical College of Ohio. But "troubles either real or imaginary" brought Dr. Drake's career to a close here, after a single session. In 1850 we find him again at Louisville, and, in 1852, he finally left it, "once more to re-enter the Medical College of Ohio, now re-organized with an abler Faculty, and under brighter auspices." But the chequered career was now to be closed; and, "just at the opening of the session, full of hope and expectation about the classes and prospects of the Institution, the hand of death was laid upon him."

Dr. Drake was distinguished as a philanthropist, and was instrumental in founding many of the valuable benevolent institutions of the West. He was also foremost in promoting schemes of public improvement, and took a decided and active part in several of the great political questions of the day. He was emphatically, one of the *public men* of the West; a marked and influential citizen.

As a writer, he was voluminous, original, and industrious. He was frequently connected editorially with the medical journals of the West, and a steady contributor to them during his whole medical career. "But the most splendid exhibition of his genius is his work on the Diseases of the Interior Valley of North America, an enduring monument of his industry, his research, and his ability." As early as 1822, he issued a circular, requesting the co-operation of his professional brethren of the South-west, in furnishing material for this work.

"In 1837, fifteen years after the publication of his circular, he found, for the first time, sufficient leisure to enter vigorously upon the collection of materials for his long contemplated work In the summer of this year, accompanied by his two daughters, he visited a portion of the South for that purpose, during a tour of about three months. In 1843, he made a second tour, embracing Louisiana, Florida, Mississippi, Alabama, and the Gulf of Mexico; and subsequently he explored the interior of Kentucky, Tennessee, the two Carolinas, Virginia, Western Pennsylvania, New York, Illinois, Indiana, Michigan, Iowa, Wisconsin, Missouri, the great Lakes and Canada. Wherever he went his fame preceded him, and he was kindly received by his professional brethren, many of whom vied with each other to show him attention and hospitality. It was during his absence upon these missions, which he performed with the zeal of an apostle of science, that he wrote those numerous and interesting travelling editorials, as he styled them, for the Western Journal of Medicine and Surgery. These epistles, which form so conspicuous a feature of that periodical during the time referred to, were usually descriptive of the manners, habits, and diseases of the people among whom he wandered, of the climate, scenery, and productions of the country, and,

in short, of whatever seemed, at the moment, to strike his fancy, or interest his mind.

"The materials thus collected were gradually digested and arranged, and finally presented to the profession, in the summer of 1850, under the elaborate title of "A Systematic Treatise, Historical, Etiological, and Practical, on the Principal Diseases of the Interior Valley of North America, as they appear in the Caucasian, African, Indian, and Esquimaux Varieties of its Population." The work, the first volume of which only has yet appeared, is illustrated by numerous charts and maps, designed and engraved at great expense, and was printed and published at Cincinnati under the author's immediate supervision. A second volume, the composition of which was nearly completed at the time of his decease, will be issued during the ensuing summer, under the care of a competent editor, and will be entirely devoted to subjects on practical medicine. The two together will constitute a monument of the genius and industry of their author, as durable as the mountains and the valleys, whose medical history they are designed to portray and illustrate. The toil and labor expended upon their production afford a happy exemplification of what may be accomplished by the well directed and persistent efforts of a single individual, unaided by wealth, and unsupported by the patronage of his own profession.

"It was originally the intention of Dr. Drake to comprise his work in two volumes; but as he progressed with the elaboration of his materials, he found that he should have a sufficiency for another; which now, that he is dead, will, of course, never be completed. The treasure remains, but the key wherewith to unlock it is gone.

"Every where at home the work received the most favorable commendation. All concurred in pronouncing it a performance of stupendous labor, and not a few of the leading journals declared that it was the most original production that our country had yet furnished. One of the most beautiful and appreciative notices of it appeared, soon after its publication, in the Daily Louisville Journal, from the pen of my colleague, Professor Yandell. Dr. Stillé, Chairman of the committee on Medical Literature, alluded to it in terms of high commendation in his report to the American Medical Association, at their meeting at Cincinnati, in May, 1850. Abroad, its appearance was hailed with similar feelings. The British and Foreign Medico-Chirurgical Review, one of the ablest and most discriminating periodicals of the day, published a long and highly flattering notice of it."

Dr. Gross pays the following beautiful tribute to the private virtues of his distinguished associate—admitting at the same time, however, that his ardent and positive temperament had made him enemies as well as warm, staunch, and admiring friends.

"His conduct, in all the relations of life, was most exemplary. In his friendships, usually formed with much caution, he was devoted, firm, and reliable, as many who survive him can testify. His attachments were strong and enduring. Few men, as he himself declared to me only a few months before his death, possessed so many ardent and faithful

friends. His social qualities were remarkable. He loved his friends, enjoyed their society, and took great pleasure in joining them at the domestic board; where, forgetting the author and the teacher, he laid aside his 'sterner nature,' and appeared in his true character, plain and simple as a child, cheerful, amiable, and entertaining. It was during such moments, which served to relax the cords of his mind, and fit it for the renewal of its labors, that he shone to most advantage. His conversational powers on such occasions, as well as in the drawing-room, although superior, were not equal. Like all great and busy men, he had his cares and annoyance, his hours of depression and despondency, his fits of absence and restlessness."

MEDICAL NEWS.

Dr. Drake's Work.—The preparation of the second volume of Dr. Drake's work "On the Diseases of the interior valley of North America," has been entrusted to Dr. S. Hanbury Smith of Cincinnati, a gentleman who, by his varied accomplishments and intimate relations with the deceased, is most admirably qualified for this undertaking. It will probably be completed next fall.

New York University.—We learn that Dr. M. Clymer has resigned the chair of Theory and Practice of Medicine in this Institution, and that Dr. John A. Swett has been appointed in his stead.

The Opium Trade.—We are pleased to receive a copy of the new edition of a valuable pamphlet on this subject by Dr. Nathan Allen, *of Lowell, Mass.*

We learn that he is preparing an article upon the abuse of opiates in Great Britian and the United States, and that he will be greatly obliged to merchants, druggists, or members of the medical profession who will communicate to his address, as given above, any facts bearing upon this subject.

The sixth annual meeting of the American Medical Association will be held in the city of New York on Tuesday, May 3, 1853.

The secretaries of all societies and other bodies entitled to representation in the association, are requested to forward to the undersigned correct lists of their respective delegations as soon as they may be appointed; and it is desired by the committee of arrangements that the appointments be made at as early a period as possible.

The following is an extract from Art. II of the constitution: "Each local society shall have the privilege of sending to the association one delegate for every ten of its regular resident members, and one for every additional fraction of more than half of this number. The faculty of every regularly constituted medical college or chartered school of medicine shall have the privilege of sending two delegates. The professional staff of every chartered or municipal hospital containing a hundred inmates or more, shall have the privilege of sending two delegates; and every other permanently organized medical institution of good standing shall have the privilege of sending one delegate."

EDW'D L. BEADLE,
One of the Secretaries, No. 42 Bleecker st., New York.

QUEEN'S COLLEGE FOR LADIES.—Medical students who diligently attend the courses of lectures prescribed by the licensing bodies, consider themselves well worked, although at no time are they advised to attend to more than four subjects during the same six months, or more than four lectures on the same day. And, in verity, to keep up the attention for four consecutive hours is no small mental exertion. We remember a teacher of medicine—himself in his early days one of the most distinguished students in one of the largest medical schools in the world—saying that six hours daily mental effort was as much as he ever knew a man capable of for any length of time, without injury to his mind or body. But, however different may be the opinions on this point in reference to men, we should have supposed, that, in regard to the weaker sex, the statement would have admitted of no question,—that all reasonable men would have been agreed on the impropriety of subjecting young females to a mental training exceeding in severity that imposed on students of medicine.

Our attention has been called to this subject by a physician who informs us, that he has had occasion to see more than one of the lady pupils at the Queen's College, in Harley street, in consequence of their having yielded to the temptations to over mental exertion held out to them at that institution.

The Queen's College is especially intended for young ladies qualifying themselves as governesses. The instruction is conveyed to the pupils by means of lectures, delivered by men of the highest reputation in the branches of science and literature they respectively teach.

Among the subjects discoursed on to these young ladies are Greek, Latin, Geometry, Algebra, Natural Philosophy, Astronomy, Mental and

Moral Philosophy, Logic, and Theology, Botany, Chemistry, Geology, and the useful arts!!!

For five or six hours in succession are girls, between the ages of 17 and 20, daily lectured to at the Queen's College on these subjects,—subjects, it will not be doubted, calling for as much reading, and as great mental exertion, as any comprised in the curricula of the Apothecaries' Society, the College of Surgeons, the College of Physicians, or the Universities of Dublin, Edinburgh, or London. Who can wonder that the result is what we are told it is? A paper is now being extensively signed by the leading members of the Profession, expressive of their conviction, that a knowledge of the Principles of Physiology is most desirable for schoolmasters. May we not add, that a knowledge of cerebral physiology is essential for those who undertake the management of such institutions as that, on *one* fault of which we are now touching?

It is really too bad, on the part of the Committee, to offer to those who lay the foundation of serious organic diseases in their "College," the beggarly reward of a certificate, stating that they are mentally qualified to undertake the duties of a governess. Why not enter into an arrangement with the Senate of the University of London, by which their pupils might obtain a Degree in return for their ruined health? Perhaps a real advantage might follow—Female Bachelors and Masters of Arts, or rather Maids and Mistresses of Arts, might receive somewhat higher salaries, and enjoy a little more consideration in the families of the noble and wealthy than these certificated damsels; they might possibly, then, be as highly estimated and as well paid as ladies' maids and cooks. With this, however, we have nothing to do; but it is a duty we owe to society to call the attention of the Committee to the sacrifice of human health and life they are offering up, with no other practical result, that we can see, than the supplying those who require to have their children highly educated at a low price, with governesses who will do the work for which several masters ought to be paid.—*London Med. Times and Gaz.*

Dr. Marshall Hall.—Of course every medical reader is familiar with the name of this distinguished English author. He is now at Washington, accompanied by his lady and son. After visiting the South, he proposes to return and travel over the West extensively, and next season visit the Eastern States. Although considerably advanced in years, Dr. Hall is a laborious student, a close observer, and may justly be called one of the most celebrated medical writers of the age. We bespeak for him the attentions of the professional brotherhood wherever his steps may be directed.

BULLETIN OF PUBLIC HEALTH.—Some alarming rumors have been in circulation at Paris: we may give our assurance, that all anxiety as to the state of the public health is without foundation. Information, upon the accuracy of which we may rely, authorises us to say that the choleriform affections which have presented themselves lately at the hospitals have not exceeded the number twelve during the last six months, and that such is about the usual proportion to other cases at this season. With one exception these cases were slight; the principal symptoms characteristic of Asiatic cholera were wanting, and the patients all recovered. One single circumstance was calculated to arouse public attention, namely, five cases of this nature presented themselves at the Hôtel Dieu upon the same day the week before last. The symptoms, however, yielded to proper treatment. The influenza (la grippe) has prevailed at Paris since the last fortnight of December, and has attacked, as usual, a large part of the population. As usual, too, but perhaps rather more strongly marked in the present epidemic than in any of the preceding, the disease has presented itself under two forms, a pectoral form, and an intestinal form. Under this last form it gives rise to colic, purging, to a prostration of strength most marked, to change in the features, to general loss of temperature, symptoms which recall, in reduced proportions, some of the phenomena of Asiatic cholera. But these accidents yield wonderfully to the employment of some diffusible stimulus, viz., infusions of peppermint and chamomile, and to the administration of opium in draughts or lavements. Opium is most useful in arresting these symptoms, which do not resist treatment nearly so much as those accompanying the pectoral form of "la grippe," the progress of which, usually without danger, it is difficult to stop.

It is very true there are, at the present moment, a great number of sick in the hospitals; supplemental beds have been put into the Hôtel Dieu, and it is feared a yet larger number will be required. This fact arises from two causes. First, the suppression of the temporary hospital of Bon Secours; secondly, the exceeding mildness of the winter, which has permitted the continuance of the immense works now in progress at Paris, and has consequently retained a considerable number of laborers who usually go back at this season to their homes. To resume, in spite of "la grippe," in spite of the crowded state of the hospitals, where there are many cases of typhoid fever, nothing justifies the apprehensions spread throughout the public mind. Asiatic cholera does not exist in Paris. It is retiring daily from central Europe, and every thing confirms us in the hope, which we expressed last November, that the epidemic of Poland and Russia would die in the place of its birth.—*London Med. Times. and Gaz.*, from *Union Médicale.*

History of Corsets. By M Bouvier.—The Academy of Medicine (Séance du 25 Janvier, 1853, Presidence de M. Bérard) feeling with propriety that no subject affecting the health is below consideration, has given its attention to a report from M. Bouvier upon ladies' stays. The work is divided into two parts; the first, now before the public, being the history of stays. The report bears especially upon stays without seams and without a mechanical busk. The learned author, who seems to have ransacked both ancient and modern history for information upon so absorbing a matter, arrives at the following conclusions.

1. The history of the dress of the principal people of antiquity shows that the want of a retentive garment, more or less constricting, round the trunk in the female was felt in ancient as well as in modern Europe.

2. In other times, as now, women have been disposed to overdo this circular constriction, to the detriment of their health.

3. In the history of modern civilization, one sees, after the relinquishment of the ample tunic of the Roman ladies, the figure first simply surrounded in a well-fitting corsage; then inclosed and bound in a sort of cuirass, called "corps à'baleines;" and, lastly, brought out and supported by the present corset, the last form of this special garment.

4. Although corsets, when improperly employed, may be prejudicial, yet, when well made and well adjusted, they have not the injurious effects usually ascribed to them.

5. It is an error to attribute the constriction of the lower part of the chest to the influence of stays. A constriction is normal, within certain limits, in both sexes, and subject to vary from other causes than the pressure exercised by this article of dress.

6. There is no proof that the use of corsets produces deformity of the vertebral column.

7. Not only should motives deduced from asthetics and from the social destination of woman induce the physician to permit the use of corsets, under proper restrictions, but, moreover, there are many circumstances, such as the volume of the bosom, the relaxation or the distension of the muscular wall of the abdomen, the habitual bending of the trunk, the lateral deviation of the spine, etc., which give formal indications for the employment of this sort of bandage, whether upon hygienic principles, or as an aid to cure certain lesions.

The second part of this contribution to medical literature is to be presented at the next *séance.*—*London Med. Times. and Gaz.*, from *Union Médicale.*

RECORD OF MEDICAL SCIENCE.

PATHOLOGY AND PRACTICE OF MEDICINE.

Clinical Lecture on Laryngeal and Throat Affections, delivered at King's College Hospital. By ROBERT B. TODD, M. D. F. R. S., Physician to the Hospital.

GENTLEMEN,—You have lately had the opportunity of observing two cases, of the disease of the larynx, the other of an affection of the mucous membrane of the fauces, which will enable me to bring these subjects under your notice to-day.

Let me first remark, with respect to laryngeal diseases in general, whether it be acute or chronic, that it is very much influenced by diathesis, both in its origin and in its duration. This is very manifest in the case of the strumous as well as of the gouty diathesis. Persons of either of these forms of constitution, when once they have been attacked with laryngeal inflammation, find it very difficult, sometimes, indeed, impossible, to shake off the disease.

One of the most formidable of the acute affections of the larynx, happily less frequently met with now than formerly, is the inflammatory or membranous croup,—a disease which is characterised by the rapid formation of a layer of coagulable lymph, forming a false membrane, that moulds itself to the interior of the larynx, and will extend down the trachea, whence it is sometimes called "cynanche trachealis," even into the bronchial tubes. The pathology of this disease is not as yet by any means settled; but it may, I think, be said, that the true membranous croup is, of all laryngeal diseases, the least associated with peculiarity of diathesis. Why it is in so marked a manner a disease of childhood has received no explanation. We have in adult life a disease somewhat analogous to it, although affecting the pharyngeal rather than the laryngeal membrane. I mean that disease which is accompanied by a membranous exudation on the mucuous membrane of the velum and back of the pharynx, which the French have designated *diphtherite*—a malady in close alliance with erysipelas. Can it be that the cause and the pathology of diphtherite and of croup are alike? This subject is one which demands careful investigation, and the more so as the results of our ordinary means of treating croup are far from being satisfactory.

One of the most common forms of laryngeal disease is that which is connected with the strumous or tubercular diathesis—this is also known as laryngeal phthisis—it is usually associated with tubercular deposits in the lungs. That form of cachexia which is induced by the syphilitic poison will also often give rise to laryngeal disease, generally chronic, but sometimes exhibiting very acute and urgent symptoms. These two forms of chronic laryngeal disease may be confounded the one with the other.

Erysipelas may affect the larynx, and give rise to the most serious

consequences. It is well known that the erysipelatous poison is very prone to attack the mucous membrane of the fauces. From that the erysipelas may spread either forwards through the nostrils to the face and head, or backwards and downwards to the larynx. Erysipelas of the larynx is apt to induce a rapidly œdematous condition of the submucous areolar tissue, giving rise to that fearful malady, acute œdema of the glottis, by which the chink, so important to life, is very quickly encroached upon, and the difficulties of a severe and rapid dyspnœa, superadded to the depressing influence of the erysipelatous poison, speedily destroy life.

To these affections I may add an inflammatory condition of a chronic form, not destructive to life, nor to the tissues of the larynx. It is a chronic inflammation of the mucous membrane, very often described as a relaxed condition, with considerable enlargement of the mucous follicles. This affection is often connected with the lythic or gouty diathesis, and it likewise frequently occurs in debilitated states of the system from various causes. It is sometimes associated with a peculiar state of the nervous system, a form of hypochondriasis. That condition of throat which is so apt to occur in clergymen is of this kind.

I shall illustrate to-day the tubercular affection of the larynx, and that relaxed condition of its mucous membrane to which I have last referred.

The first case which I shall bring under your notice affords a good example of disease of the larynx occurring in the tubercular diathesis.

The subject of this affection was a girl of the name of Reynolds, in Lonsdale Ward, (Vol. xxxiv., p. 160;) she was 18 years of age, and of delicate health. The history of her case afforded abundant evidence of the existence of phthsis in her family, as she had lost her mother and one sister by this disease.

The affection from which she was suffering has been badly named "laryngeal phthsis," because the name would lead you to suppose that the disease was limited to the larynx; whereas, I believe, it never occurs without the presence of tubercles in the lungs, either in the crude or softened state. In some cases, the laryngeal symptoms are the first to manifest themselves. A patient having indications of a phthisical tendency, is found on inquiry, before any symptoms of tubercle had manifested themselves, to have been the subject of frequent slight affections of the larynx, accompanied by hoarseness and cough, and attributed to exposure to changes of temperature.

In other cases, the symptoms of phthisis develope themselves before the laryngeal symptoms commence. In the present instance, however, the affection of the larynx appeared first, and upon superficial examination at an early period, the diseases might have been viewed as one of laryngitis simply.

The patient told us that, in November last, soon after exposure to the wet and cold, she became troubled with a feeling of soreness about the throat, which was followed by hoarseness and loss of voice, and, at the same time, she became affected with a dry, suffocating cough, accompanied by severe pain in the region of the larnyx.

Pain referred to the larynx is one of the most constant symptoms of the disease, and will rarely be found entirely absent. Usually the pain causes great distress to the patient. The affection of voice varies according to the seat of the disease. If the epiglottis and adjacent folds of membrane only are involved, the voice will probably not suffer much; but, if the inflammation extend downwards, the affection of the voice will vary in severity according to the extent to which the ventricles of the larynx or the vocal cords are involved.

A symptom soon appeared in our patient which must always be regarded in a serious light; she became subject to difficulty of deglutition. The report says, that she was quite unable to swallow any solid food, and even the passage of liquids produced considerable pain, accompanied by a choking sensation, and that the food was frequently forcibly ejected from the mouth in the effort at deglutition, and that much of it passed through the posterior nostrils.

Now, you may naturally ask, what has the larynx to do with deglutition; it is true that, in swallowing, provision is made to protect the glottis, but how can disease of the larynx create dysphagia? A very little consideration of the close connexion existing between the pharynx and the larynx, and also of the intimate relations of the nerves which supply both, will furnish the solution of this problem.

You know that the rima glottidis lies immediately behind and beneath the root of the tongue, and that the epiglottis stands up between both, and seems to protect and overhang the glottis. In deglutition, the root of the tongue and the rima glottidis are forcibly compressed together, and the epiglottis, lying between them, also suffers compression, and is made thereby to cover the whole chink of the glottis. This is the mechanism by which, in deglutition, food is prevented passing into the larynx; this close apposition of the root of the tongue to the rima glottidis serves to close the latter aperture completely, provided the epiglottis retain its normal flexible and elastic state. But if the epiglottis be swollen or thickened, and rigid, or even simply highly sensitive and irritable, as from ulcers on its surface, then, by its intervention, that perfect apposition of the root of the tongue to the glottis is prevented, on which perfect closure of the glottis, and, consequently, perfect deglutition, depend.

The epiglottis may have been removed, as in Majendie's experiments and observations; and, provided no material injury have been done to the neighboring textures, the apposition to which I allude may be effected, and the glottis protected. But it rarely happens, after chronic destructive disease of the epiglottis, that the neighboring textures have so far escaped as to allow full play to the lingual and pharyngeal muscles, so that they may perform freely, and without impediment, the actions necessary for deglutition.

Disease of the larynx, then, gives rise to difficulty of deglutition, when the epiglottis, or the arytæno-epiglottidian folds of mucous membrane, but especially the former, are involved in the disease. And the degree of dysphagia is greatest when the epiglottis is swollen or so irritable that the actions necessary for deglutition are impeded through a mechanical

obstacle, or through extreme sensibility of the surface of the mucous membrane.

The nature of the dysphagia, in cases of this kind, deserves your attention. It is not only often extremely painful, and the actual effort of swallowing difficult, but the whole act of deglutition is so deranged, that the usual safeguards to the larynx below, and to the nares above, are greatly interfered with. Hence, in many instances, and especially when the epiglottis is rigid and swollen, the attempt to swallow is followed by great irritation of the glottis and by a powerful expiratory effort, by which the food or fluid is forcibly ejected upwards, partly through the mouth, and partly, and most painfully, through the posterior nares. This kind of inversion of the act of deglutition, when it frequently occurs, and is associated with other signs of laryngeal disease, is always an indication of a diseased state of the epiglottis. This feature, then, of difficult deglutition necessarily directed our attention very much to the state of the larynx in our patient.

But to proceed with the history of the case. Since the commencement of her attack, she had lost flesh considerably, and had been troubled with perspirations at night. She has frequently suffered from pain between her shoulders, and her breath has been gradually becoming more and more short. She never spat blood. As winter came on the pain returned; she lost her voice, so that she was only able to speak in a whisper, and her breathing became stridulous,—a symptom distinctly pointing to the larynx either as primarily or secondarily diseased. This symptom never disappeared; and while she was in the hospital, the noise of her breathing was so loud and peculiar, that, upon coming into the ward, your attention could not fail to be arrested by it. At the same time she suffered from a troublesome hacking cough, accompanied with the expectoration of a greenish muco-purulent matter; her deglutition became worse, and she was unable to swallow even very small quantities of liquids or solids without considerable difficulty and pain.

The first question which proposed itself for our consideration, was whether the laryngeal symptoms arose from the occurrence of certain morbid changes in the larynx itself,—in fact, were dependent upon disease of the larynx,—or whether they were caused by the pressure of some intrathoracic tumor on the left recurrent nerve. That pressure on the recurrent is quite sufficient to give rise to such symptoms, has been abundantly proved by cases of thoracic aneurism. The aneurisms which usually produce such pressure are small, globular dilatations of the vessel, occurring about the bifurcation of the trachea.

Some years ago, I recollect meeting with a case of this kind which exhibited all the more prominent symptoms of chronic laryngitis. The patient was brought into the ward just as I was leaving it after my visit, and I had no opportunity of making a sufficiently minute examination of her at that time. There were great emaciation, stridulous breathing, dyspnœa, with chronic cough, hoarseness, and pain referred to the larynx. Unfortunately, the patient died very soon after her admission, and probably in consequence of exhaustion brought on by moving

her. At the *post-mortem* examination, we found an aneurism situated just at the bifurcation of the trachea, and pressing upon the left recurrent nerve so forcibly as to cause complete obliteration of the nerve tubercles; hence there was complete paralysis of the muscles of the larynx supplied by the nerve of this side, and they were found small, ill-nourished, and shrivelled.

Some months ago we had a remarkable case in Rose Ward, as to the precise nature of which we had some doubt. The man suffered from symptoms clearly referrible to the trachea and larynx. He was troubled with violent irritative cough, and the expectoration was tinged with blood; but the voice was slightly affected, and the breathing was not stridulous. The diagnosis lay between ulcerative disease of the trachea and the existence of a small aneurism pressing on the recurrent nerve. The patient died suddenly by hæmorrhage; and a little above the bifurcation of the trachea we found a small perforating ulcer, which had incidently been caused by the pressure of an aneurism of the arch of the aorta against the trachea.

How, then, are we to make the diagnosis between actual laryngeal disease and that deranged state of the larynx which stimulates inherent disease of the organ, but which really depends upon the existence of an irritating or paralysing cause at a distance from the larynx?

To determine affirmatively the existence of inherent disease of the larynx, you must not trust solely to the symptoms. Those symptoms you will find to be impaired voice, breathing difficult and stridulous, and the dyspnœa, although constant within certain limits, yet becoming much exacerbated from time to time, pain referred to the larynx, and more or less difficulty of swallowing. Now, all of these symptoms may be caused by the pressure of an aneurism or other intrathoracic tumor on the recurrent nerve.

You must add, therefore, to the examination of symptoms, inspection with the finger, which alone will often enable you to decide.—With the forefinger of the right hand you will generally be able to reach the epiglottis with great ease, and you may often feel its laryngeal surface; the finger may be passed along the arytæno-epiglottidian folds, and any thickened or roughened state of the mucous membrane covering these parts can be readily felt. When the epiglottis is much thickened, you will find it more or less rigid, with edges rounded, or it may be so swollen as to appear like a small globular tumor between the tongue and the larynx. If the mucous membrane covering the epiglottis be diseased, the surface will feel uneven or rough, or it may be hollowed out into small depressions, with irregular and perhaps callous edges. Generally, when the mucous membrane of the larynx is affected with chronic inflammation, that of the fauces is often found to sympathize with it; hence, upon looking into the mouth, you will often notice an injected state of the mucous membrane covering the back of the mouth and throat. When ulcers exist in the larynx there will usually be found a certain amount of purulent expectoration, which may in part, however, come from the lungs, if, as usually happens in cases of laryngeal phthisis, these organs are also affected with tubercular deposit. On the other

hand, if the lungs be found perfectly healthy, it may be inferred that all the secretion is derived from ulcers in the larynx, which is the case in syphilitic ulceration uncomplicated with other disease. In tubercular disease, expectoration is only met with in cases where the tubercles are being softened and broken down. In the crude state, before the tubercular deposit has undergone disintegration, there is no expectoration whatever from the lungs.

If the laryngeal symptoms are caused by an intra-thoracic tumor, there can be no difficulty in the diagnosis when there is a bulging or prominence to be found in any part of the chest; but if the tumor be small, and situated near the bifurcation of the trachea, considerable difficulty will often be experienced before any conclusion can be arrived at, and in such cases the diagnosis will rest in a great degree upon negative evidence. The absence of pain referred to the larynx, and the absence of purulent secretion, will to a certain extent direct the attention to the interior of the thorax for an explanation. The degree and kind of dysphagia will sometimes help you. Generally speaking, the dysphagia is not nearly so great nor so prominent a symptom where there is intra-thoracic tumor, as in cases of laryngeal disease; and it differs also in kind. In the latter, the dysphagia is evidently obstructive, so to speak, and the food is apt to go the wrong way; it sputters back into the mouth and into the posterior nares; but in tumor cases there is a feebleness and difficulty in using the pharyngeal muscles while the passage is quite free and unobstructed.

The respiratory movements in aneurismal cases are more hurried and otherwise impaired than when the larynx only is affected, although air passes freely into the lungs, or the greater part of them. In laryngeal cases the respiratory affection depends upon the amount of obstruction which exists to the passage of air into the lungs, from the diminution of the size of the glottis; and, in these cases, the dyspnœa arises from the want of air. In these laryngeal cases, auscultation indicates feebleness of breathing and faintness of respiratory murmur, which are uniform if there be no localised tubercular deposit. In intra-thoracic tumor you may have general-rhonchus, accompanying a paroxysm of dyspnœa; or, if the tumor press on one bronchus more than another, the ronchus will be greatest on that side, or the sounds of breathing most feeble; it will be plain that less air gets into that lung than into its fellow. In the present case we had no difficulty in coming to a conclusion, the tubercular diathesis being well marked both in the patient's history, and also by the presence of physical signs; moreover, the patient's age was against the presence of aneurism, and this is a point which will often prove of valuable assistance to you in pronouncing an opinion, for aneurism very seldom occurs before the age of thirty.

In our patient, it was a question at first whether the disease of the larynx was syphilitic or tubercular. There was no history of syphilis to be obtained from the girl herself, but this, as you may easily conceive, could not be considered as conclusive against the syphilitic origin of the malady. There were, however, no other marks or symptoms of syphilis. However, there could be no doubt about the existence of tuber-

cle. Phisis was traced in her family history, and the upper part of the left side of chest yielded a dull sound to percussion, both in front and behind. The breathing in this situation, although very feeble, was distinctly tubular, and there was, so far as the sign could be depended on in a case where voice was at a minimum, increased resonance of voice. On the right side, in the situation of the apex of the lung, there was ronchus and some crepitation.

From all these symptoms and signs we set the case down as one of tubercular disease of the lungs, in which there was a chronic thickening of the mucous membrane of the larynx and epiglottis, and probably ulceration in or near the ventricles of the larynx, impending the movements of the chordæ vocales. Although in laryngeal cases the precise seat of the disease may generally be most accurately assigned, we cannot always predicate the particular nature of the affection, which may sometimes be merely thickening, and sometimes ulceration of the mucous membrane. I know of no definite sign which will enable us to diagnose with certainty the presence of ulceration, but it exists in a large number of cases of laryngeal disease connected with pulmonary pthisis, and, if there be blood and pus in the sputa, it will probably be always found. In tubercular ulceration, the ulcers appear to be formed by the irritation and inflammation consequent upon the deposit of tubercular matter in the follicles of the mucous membrane. At the same time, Louis holds that laryngeal and tracheal ulcerations may be caused simply by the irritation produced by the contact of the tubercular matter expectorated from the lungs, and I have more than once observed a fact which certainly seems to bear out this explanation. I have found crude tubercles in one lung, and softened tubercles in the opposite lung; the bronchus connected with the lung in which the tubercles were softened, exhibited an ulcerated state of the mucous membrane, while the bronchus of the opposite side was entirely free from them, which, no doubt, might be attributed to the passage of sputa along the one, and not along the other.

In our patient we inferred the existence of crude tubercles in the left lung, but we thought that in the apex of the right lung softening of tubercles had taken place, and that possibly a small cavity might have been formed. I thought that in this case the larynx was very likely affected with aphthous ulcerations, in their nature very similar to those aphthous ulcers which are so common on the tongue and fauces. The mucous membrane of the epiglottis felt as if it were considerably thickened, and no doubt the same condition prevailed in that covering the lips of the glottis, so that the chink became in this way much narrowed, and a considerable impediment was offered to the free entrance of free air into the lungs. On the epiglottis I thought I could detect a number of small ulcerations, more particularly on its laryngeal surface. Such ulcerations would readily increase the difficulty of deglutition and the pain which the girl suffered when anything passed over the epiglottis. The mucous membrane was so irritable, that when the patient attempted to swallow liquids, a great quantity was often ejected through the posterior nares.

The symptoms did not vary much in the further course of the case. Treatment, as you would expect, was of very little use, and all that we attempted to do was to uphold the strength with nourishing food, and to relieve the distressing pain and irritability of the throat, which prevented her from sleeping, by giving small doses of opium at night.

Occasionally, to relieve the extreme irritability of the larynx, a sponge, tied on a probang, and soaked in a strong solution of nitrate of silver, was passed down to the larynx, so as to apply the solution well to the epiglottis, and to allow some of it to trickle down into the glottis. This application was always followed by considerable relief, as the patient always expressed herself as much better after each application, and her pain was relieved, although only temporarily.

The difficulty of swallowing and the dyspnœa increased in severity, and the vomiting continued unabated, so that she was unable to take much nourishment. The exhaustion increased, and, on the 25th, she was attacked with convulsions, from which she never rallied.

In the upper lobe of the right lung, a cavity about the size of a filbert was found, and was filled with pus. The remainder of the upper lobe, of the same lung, was infiltrated with tubercular matter. The upper lobe of the left lung contained crude tubercles, so that tubercular disease was not much advanced. We found numerous aphthous ulcerations on the mucous membrane of the ventricles and cordæ vocales, and also upon the laryngeal surface of the epiglottis, and these ulcers you may now see in the preparation. The mucous membrane covering the epiglottis and upper part of the larynx was much thickened, and the glottis very much contracted in size.

In reference to the frequency with which ulceration is met with in different parts of the air passages, Louis states, that, out of seventy-one cases, there were found thirty-one in which ulcers were found in the trachea, twenty-two in which the larynx was similarly affected, and in eighteen ulcers were found upon the epiglottis.

I shall now notice another case, which is more deserving of your attention than the last, inasmuch as it is an example of a very common affection of the fauces and larynx, and one which is curable, or at least very manageable. The patient is a man named Osborne, in Sutherland Ward. His symptoms are a harsh, irritative cough, with slight mucous expectoration, in quantity not at all proportionate to the violence of the cough, and also a considerable degree of hoarseness of voice. Upon looking into his mouth you find the mucous membrane of the faucial region exhibiting a dusky red blush, and you will observe a number of red points, as of raised papillæ, which are the mucous glands of the velum and back of the pharynx, in an enlarged and swollen state. The appearance of the mucous membrane generally, was one of great laxity, and the uvula was more or less elongated. In some cases the uvula is so much increased in length that it reaches to the glottis, and excites irritative cough. The inflammation upon which this state of mucous membrane depends, never leads to the formation of pus or lymph. It may, however, run into a slightly œdematous state, but this is rare; and

it is not always limited to the pharynx only, but often extends to the larynx and trachea, and sometimes into one or more bronchial tubes. This kind of inflammation is very common in men of gouty diathesis, and in women of a relaxed habit who do not take proper care of their health. Such persons you will often find complaining of being very subject to attacks of hoarseness, and liable to catch cold upon the slightest exposure, and even without any apparent cause. The hoarseness will remain after the other symptomps of the cold have gone for a considerable period, in spite of various forms of treatment adopted for the cure, and it is accompanied with a troublesome cough which harasses the patient very much. Persons laboring under such symptoms as these are often treated for bronchitis, and take large quantities of expectorant and other medicines for the relief of the cough. The seat of the irritation upon which the cough depends is thought to be in the bronchial tubes, and its real position (the fauces) is overlooked. On carefully examining a patient laboring under this affection, you will find the lungs quite sound and the bronchial tubes free from irritation. Such being the case, you next proceed to examine the fauces, and you find the swollen, red, relaxed condition of membrane which I have described.

The character and constituents of the cough will help you to distinguish this affection. It is a highly irritating cough; the patient coughs with all his might to dislodge something which irritates the fauces or the larynx and upper part of the trachea. The product of the cough is very trifling, a little saliva and mucous, or throat and nasal mucous, which in London is often mixed with sooty matter. The expectoration is in general infinitely small as compared with the vehemence of the cough. Exposure to cold air always excites and greatly aggravates the cough. The patient often complains that his cough is particularly troublesome on his first going to bed; this may be either from change of temperature from warm to cold, or it may be caused by the assumption of the horizontal position, when the uvula dropping upon the glottis may excite cough.

Cases of this kind are most rife during the cold winter months, and in the early spring, when the cold north or east winds prevail so much.

With regard to our patient Osborne, he was a hard-working, industrious man, with somewhat of the lithic acid diathesis. Three years ago he was admitted into hospital with several small, hard tumors in the tongue, each about the size of a marble, which excited our fears as regards their malignant nature. We were not able to determine any very satisfactory history of syphilis, but they disappeared very quickly under iodide of potassium, and he got perfectly well. In the beginning of this winter, however, he was attacked by cough, which he attributed to exposure to cold. He had been working hard all day in a close room, and in the evening was exposed to the cold air on his return home. This soon brought on irritative cough, which was very obstinate, and did not yield to the usual remedies. On carefully examining the chest, we found no indications of bronchial irritation, but the fauces presented

the injected, swollen, relaxed condition of mucous membrane, with enlarged mucous glands, which I have already described.

I treated him with the local application of the solution of nitrate of silver (ʒss. to the ʒj.) by means of a probang, which was thrust behind the epiglottis, down to the glottis, on the plan of Dr. Horace Green, of New York. The patient can always tell whether the sponge enters the larynx or not, from the great irritation it excites when it passes into the glottis; and in the withdrawal of it the operator feels a certain resistance, caused by the sponge being grasped by the muscles of the larynx, which resistance is not felt when it simply passes into the œsophagus. To pass the sponge into the larynx requires a good deal of steadiness and expertness on the part of the operator. While I fully admit the feasibility of the operation, I nevertheless suspect that the sponge may often pass simply into the œsophagus when it is thought to enter the larynx.

The application was continued every morning for three weeks, either to the glottis or to the neighboring mucous membrane; and partly, no doubt, from this cause, and partly from his avoiding exposure to the cold air, he left the hospital very much relieved, at the expiration of that period.

This case affords a good example of that particular form of affection of the mucous membrane of the throat and larynx which is not benefitted by the administration of any drug whatever, but which almost always is relieved by the local application of nitrate of silver, sulphate of copper, or even of simply astringent substances.

This plan of treating affections of this kind has long been familiar to practical men in this country, and was long ago practised very extensively by the late Mr. Vance, of this city. Dr. Green, of New York, had the boldness to pass the sponge into the larynx, and to show that such an operation was a less formidable one than was previously supposed. It is, however, an operation not wholly free from danger, and which is not attended with proportionately good results. I do not hesitate to state this from considerable experience of it. In the vast majority of cases, quite as good effects may be obtained from applying the solution to the neighboring mucous membrane. Pass the probang down to the glottis, and swab well about its neighborhood, and you will do as much good as if you passed the sponge into the rima glottidis; and sometimes you will do more good and cause less irritation.

For some years past I have been in the habit of applying the solid nitrate of silver to the mucous membrane of the fauces, the velum, uvula, and the pillars of the palate; and it may be brought very near to the laryngeal membrane by sliding the caustic along the posterior pillars of the palate, some way down. By this treatment you may obtain results quite as satisfactory as by pushing the probang into the glottis, and in many instances more so; and the plan is, I think, on the whole, safer and more manageable.

I have been supplied by Mr. Matthews, the surgical instrument-maker of Portugal street, with a modification of the ordinary porte-caustique, which is very useful for applying nitrate of silver to the throat.

The caustic is placed in a case made of platina; this moves on a ball-and-socket joint, and may, by that means, be fixed at any angle. Its handle is constructed in telescope fashion, and may be drawn out to any length that can be required; so that, by its aid, you may apply the caustic very low down.

But in the application of nitrate of silver a great deal of caution is necessary. You must take great care not to apply it too freely, else you may cause too much inflammation and ulceration. In some cases, indeed, it is impossible to avoid these consequences; but, with due care, you need never find them so much as to be troublesome, and very often they are salutary. I always make the patient use the precaution of gargling his throat very frequently with the coldest water—iced water if it can be had—for some hours after the application of the caustic; and by these means inflammation is limited, and the parts strengthened.

If time permitted, I could tell you of numerous instances of coughs of the most troublesome kind, and of long duration, which had resisted all the ordinary cough medicines, and yielded to three or four applications of nitrate of silver.—*Lon. Med. Times and Gaz.*

Yeast in Diabetes.—Dr. Wood stated that he had a case of diabetes now under treatment in the Pennsylvania Hospital, which, in the results thus far obtained, was not without interest in a therapeutic point of view. He would first present a brief sketch of the case, drawn up by his young friend, Dr. R. A. F. Penrose, one of the resident physicians of the hospital, and would then offer a few remarks.

"Mary Ann Cain, born in Ireland, a domestic, aged thirty, was admitted into the hospital, November 16, 1852, for palpitation of the heart. Upon examination, the heart was found acting with unusual energy and quickness; but the sounds were normal Her general condition was one of extreme emaciation, her weight eighty-three pounds, the pulse frequent but not strong, the tongue red and smooth. She stated that she suffered much from constant thirst, and had a perpetual desire to eat. Attention was directed to the urine; and it was found that she was passing from 18 to 20 pints daily, of a specific gravity varying from 1036 to 1040. On the addition of yeast it fermented briskly. Boiled, after the addition of solution of sulphate of copper and solution of caustic potash, it yielded a reddish-brown precipitate; boiled with solution of potassa alone, it acquired a dark-brown or bistre tint. The case was clearly one of saccharine diabetes.

"Two days after admission, she was placed upon an animal diet, with non-farinaceous vegetables, and one small biscuit three times a day. Cod-liver oil was also directed, and a *teaspoonful of yeast, three times daily, immediately before meals.*

"22*d*. The quantity of urine now passed in 24 hours was ten pints, and the specific gravity 1022. The thirst and appetite were much diminished. The same treatment continued.

"*27th.* The patient complained of total loss of appetite, and could not take her cod-liver oil. The tongue was extremely red and inclined to dryness, and there was pain on pressure in the epigastrium. The quantity and sp. gr. of the urine were as at last date. The cod-liver oil and animal diet were suspended, and she was placed upon farinaceous drinks with milk. A pill composed of one grain of blue-mass and a quarter of a grain of opium, was directed four times a day, and the yeast was continued.

"*30th.* The patient felt much better, her tongue was moister and less red, and the gastric symptoms were much ameliorated. Not finding milk to agree with her, she lived chiefly on oatmeal gruel, with a soft-boiled egg occasionally. The quantity of urine had now been reduced to seven pints in twenty-four hours, and its specific gravity to 1020.

"*31st.* The patient continues as yesterday, the urine having amounted, in the last period of twenty-four hours, to only six pints; the specific gravity not examined."

Much light, Dr. Wood observed, had recently been thrown upon the pathology of diabetes. The disease is now admitted to be characterized by sugar in the blood, the kidneys being only secondarily affected. The experiments of McGregor proved that sugar exists in great excess in the stomach of diabetic patients after eating, and it may readily be supposed to pass thence into the circulation. Bernard has shown that the liver, in its normal action, produces sugar out of the portal blood, and that this sugar passes through the vena cava, right side of the heart, and pulmonary arteries, into the lungs, where, in a healthy state, it is wholly consumed. Excess in the sugar-producing action of the liver, or deficiency in the sugar-consuming action of the lungs, may be followed by the entrance of saccharine matter into the general circulation, and thus give rise to diabetes. The same physiologist proved that, by irritating a certain point of the medulla oblongata, the liver was made to generate a great excess of sugar, which, escaping decomposition in the lungs, entered the arterial circulation, and passed out with the urine.

We thus perceive that there may be various sources of the saccharine impregnation of the blood. *In the first place*, it may arise from some defect in the gastric digestion, in consequence of which farinaceous and other nutritive substances are converted into glucose or grape-sugar, which remains unchanged; or, *secondly*, from hypertrophy or other diseases of the liver causing an over-activity of the sugar-producing function; or, *thirdly*, from diseases of the lungs, impairing their power of consuming the sugar; or, *fourthly*, from irritation of the nervous centre in the medulla oblongata which appears to control the action of the liver in relation to this product; or, *lastly*, from two or more of these sources combined.

Now, in the case before us, no organic affection of the liver or of the lungs could be detected, and there was no reason to suspect the medulla oblongata; but the smooth, reddened state of the tongue, and

the epigastric tenderness, seemed to point directly to the stomach as the seat of the disease.

In the number of the *Edinburg Monthly Journal of Medical Science*, for October last, it it is stated that Dr. Gray, of Glasgow, had been induced to make trial of *rennet* in a case of diabetes, in the hope that, as this body converts sugar out of the body into lactic acid, it might be found to produce a similar change within the stomach, and the lactic acid thus generated might be eliminated from the system, or rather decomposed by the respiratory process. A teaspoonful of rennet was given three times a day. In eight days, the specific gravity of the urine was reduced to 1025, with but a trace of sugar; in twenty-five days, the quantity was four pints, and the density 1022.5, and no sugar could be detected. At the end of six weeks, the urine remained free from sugar, and the patient had so far improved in health and strength as to return to his work.

It occurred to me, observed Dr. Wood, from the results of this case, that yeast might prove equally beneficial, by causing a decomposition of the sugar in the stomach such as it is well known to occasion out of the body, resulting in the production of acetic acid. Being under the impression that in the case now reported to the College, the primary disease probably resided in the stomach, and that the diabetic sugar was generated there, I determined to try the effects of this remedy. The patient had been two days in the house before she was placed under treatment, and during this period no change had taken place in the quantity or character of the urine. It will have been noticed that quickly after the commencement of treatment, a very great change took place in both these respects; the quantity of urine being reduced, in the course of four days, from twenty pints to ten daily, and the specific gravity from 1036 or 1040 to 1022. But the almost exclusive use of animal food may be supposed to have contributed to this result. In consequence of the gastric inflammation, it was necessary to suspend this diet, and to allow the patient to use farinaceous food, the yeast being continued. So far from any increase of urine in consequence of this change of diet, its quantity was still further reduced, so that, upon the last day upon which it was examined, it did not exceed six pints, while the specific gravity was as low as 1020, the quantity having been reduced from twenty pints to about double that of health, and the density from 1040 to that of normal urine. There can be no doubt whatever that the sugar has been very greatly diminished; and there is no cause apparent to which the result can be ascribed except the use of yeast.

What may be the further progress of the case, cannot, of course, be foreseen. Even should we succeed in preventing altogether the elimination of sugar with the urine, it does not follow that the case will end in recovery. The remedy is addressed only to one of the effects; a very important effect, it must be admitted, and itself capable of producing great mischief, but still by no means the whole disease. Nevertheless, if, by the steady use of a remedy so little disagreeable as yeast, we can prevent the abnormal production of sugar, and the exhausting

effects on the system of the excessive secretion of urine occasioned by it, we shall have gained one great point. We shall at least gain time for accurately investigating the source of the evil, and applying such remedies as may offer a reasonable hope of permanent benefit.

Dr. Wood observed, finally, that he should probably take occasion, at a future meeting of the College, to report the further progress of the case; and should have been in less haste at present, had he not thought that the remedial measure had some claims to notice, and been desirous that it should, as quickly as possible, receive an ample trial, so that its merits might be conclusively tested.—*Trans. College of Physicians, Philadelphia.*

EPIDEMIOLOGICAL SOCIETY.

Mr. Grainger read a paper, of which the following is an abstract:

"*On the Influence of Noxious Effluvia on the Origin and Propagation of Epidemic Diseases.*—Although some diversity of opinion prevails among medical men in reference to epidemic disease, especially on the subject of contagion, all are agreed as to the noxious influence of overcrowding, defective ventilation, and other similar defects, prevalent in populous districts. It has occurred to me, that, without entering into the wide field connected with the nature and operation of noxious effluvia in general, it might not be altogether unprofitable if some elucidation of the facts which have fallen under my observation, both as regards the causation of, and exemption from, epidemic disease, were laid before the members of this Society. No one is more ready than myself to subscribe to the doctrine so well enunciated by my friend, Dr. Carpenter, in his valuable paper "On the Predisposing Causes of Epidemics," that it is not simply the collection and tabulation of facts, nor even mere empirical generalization, that will suffice; it is the principles and laws springing out of them which are demanded, if sanitary investigations are to be raised to the rank of a science. But fully recognising this as constituting the great aim and end of all these researches, and not forgetting the large amount of practical knowledge acquired of late years, it yet appears to me that there is abundant room and ample reason for elucidating evidence. Many points of prime importance to the public health as to matters of fact are still in much uncertainty. Doubts relating to agents assumed by sanitary inquirers to be deleterious still linger in the Profession, and by no means only among its least distinguished or influential members. The exact operation of animal effluvia, of a cesspool atmosphere, of excessive moisture,—conditions often combined in the miserable courts and alleys of our large towns,—is by no means fully ascertained. Extended inquiries of late years have abundantly proved that the same deleterious agents operate as predisposing causes in regard to the whole class of zymotic diseases; that what will develope the exciting cause of fever will also develope scarlatina, small-pox, diarrhœa, or cholera. So certain and notorious is this fact to those who practise among the poor, that before the outbreak of

any epidemic, knowing where the predisposing causes are rife, they can foretell the precise localities where it will occur, nay, even name the alley or point to the exact house that will suffer. Such considerations have long induced me to conclude, that in regard to zymotic affections, the predisposing are infinitely more important than what are called the immediate or exciting causes. In regard to low fever, for example, it is certain that its efficient cause, the *materies morbi*, is never absent from London and other large towns; and yet it is rarely, many would say never, developed, unless there be superadded to it some predisposing cause. So true is this, that we not only daily see in the metropolis and elsewhere hundreds and thousands of persons living in the front streets exempt from typhoid fever, while the inhabitants of the wretched courts behind are scarcely ever free from it; but if by chance a given number of persons are planted in the very centre of an epidemic district, but freed from the predisposing causes of zymotic affections, they also, as a rule, will still escape."

"*On the Influence of Human Effluvia.*—According to my observation, the most injurious of all the causes operating on the diffusion of epidemic diseases, are the effluvia proceeding from the human body, particularly from the lungs and skin. The special deleterious agent consists of the effete, and, as it has been proved experimentally, highly putrescent organic matter, mingled with the expired air. That it is, when reintroduced into the living body, highly injurious, might be inferred from the very fact of the careful provision made by nature for its incessant elimination from the system. That it is small in amount is no objection to the intensity of its action; for, to the physiologist it is well known that a minute quantity of a powerful agent—the putrid matter introduced on the point of a needle in the inspection of a dead body, a single drop of concentrated prussic acid placed in the mouth of an animal, is sufficient to destroy life. It is in overcrowded bedrooms, in unventilated schools, workhouse dormitories, &c. that this effete matter taints the air, and, entering the blood, poisons the system. Although there is a great diminution in the amount of carbonic acid in the air evolved in the lungs, still the evil, quoad the development of fever, scarlatina, cholera, and so forth, depends on the organic, not the chemical products of respiration." The learned author referred to some experiments proving the truth of this assertion. He then continued: "It is, however, familiar to all practitioners, that human effluvia specially exhibit their poisonous influence when either multitudes of human beings are crowded together, or where a smaller number are placed in confined and unventilated sleeping-places. Many instances of the influence thus exerted on all kinds of epidemic disease, have come under my notice, but only a few illustrative examples can here be adduced. The following case illustrates the effect of overcrowding in respect to cholera. During the epidemic of 1849, the inmates of a reformatory establishment for young women suffered intensely from the pestilence, 40 out of a total of 96 being attacked, and 15, or rather more than 15 per cent., falling victims to the disease. Now, these poor sufferers were previously in per-

fect health; they were well fed, well clothed, and carefully attended; but the dormitories were low and much crowded; the windows, for the sake of seclusion, were partly closed up, thus greatly interfering with the ventilation. After a careful investigation, I could detect no other cause than this for the sudden outbreak occurring at a period when there was little cholera in the neighborhood. As regards the influence of overcrowding in the development of low fever, I may appeal to the experience of every medical practitioner whose duties call him much among the poor. It matters not whether we speak of the closely packed common lodging-house, of rows of houses built back to back, of the small, unventilated, and often single sleeping apartment of the mechanic, or of the ill-built cottages in rural districts, with their one bed-room, overhanging thatch and small lattice; wherever, either from the presence of numbers or the absence of ventilation, you have the fetid sickening air generated by human effluvia, there assuredly you will find fever. Although observed especially among the poor, fever, as it occurs in this country, is not especially dependent on poverty and destitution. Want may, indeed, aggravate the evil, and actual famine, as we unhappily saw a few years ago in Ireland, may give immense development to typhus; but that persons well fed, living in comfort, and strong in health, may suffer severely from low fever, is shown by a large experience. One of the best examples, perhaps, is furnished by the sailors belonging to the collier vessels frequenting the Thames. These men, as a body, are in the prime of life, robust and well fed; but as I found by examining many of these vessels, the place where they sleep—the forecastle—is excessively small and confined, and with this serious additional evil, that as the hatchway is usually flush with the deck, whenever there is much sea, it becomes necessary to close the hatchway, where the unfortunate sailors must be without any window, as if shut up in a close box. When, too, the vessels come to London, as only one man is required to keep watch at night, all the sailors are crowded at the same time into their closely-packed berths. Some years ago the attention of Mr. Busk, the distinguished surgeon of the Seaman's Hospital Ship, was attracted to the large number of typhus cases which were admitted. In 1841, they amounted to 147; in 1842, to 167. It appeared that of all the vessels in the Thames, the colliers furnished the most fever cases. In investigating this question I could detect no other cause than the polluted air these men must have breathed in the confined forecastle. That there is nothing connected with a sailor's mode of life to expose him to typhus, is proved by the experience of well-managed vessels, and, as one among the many proofs which might be adduced, I may mention that Mr. Clark, who has made ten voyages to India as surgeon in Messrs. Green's fine vessels, had never had a single case of typhus." The author, after referring to the very great improvement in the health of those of the working classes who inhabit the model lodging-houses erected in different parts of the town by the Society for the Improvement of the Dwellings of the Laboring Poor, and to the highly satisfactory working of the admirable

Act carried by the exertions of the Earl of Shaftesbury for controlling common lodging-houses, said that his own experience of the deplorable conditions of these abodes corroborated the statements of Capt. Hay; all tended to show that such pestilential places were the habitats of disease, and the cause of enormous expense to the rate-payers.—*London Med. Times and Gaz.*

M. Lebert *on Cancer.*—M. Lebert, the author of the well-known work on Cancer, lately read a paper before the Surgical Society of Paris, on Fibro-plastic Tumors. The principal facts and conclusions brought forward by M. Lebert are the following:—

1. Fibro-plastic tumors are composed of a cellular texture of new formation, similar to that seen in embryonic life. Fibro-plastic tissue may have an inflammatory origin, it may be the result of hypertrophy, or arise quite spontaneously.

2. Fibro-plastic tumors are made up of a soft lobulated tissue, of a pinkish yellow; or else of a firmer texture, of a pale hue, and more homogenous; or, finally, of a mixture of a gelatiniform substance with the two structures just mentioned. These tumors are situated in the skin, or the subcutaneous areolar tissue; they may be buried in the depth of the muscular masses of a limb, especially the thigh; or else they may spring up in bone, a favorite seat being the jaws; or finally, they may grow upon the meninges.

3. Fibro-plastic tumors present the same characters in man and in domestic animals.

4. The Fibro-plastic texture, which owes its origin to inflammation, has a marked tendency to fibrous transformation; it is often met with in protracted inflammations, of which it is at the same time the support and the produce.

5. Fibro-plastic tumors present either a smooth or lobulated surface, and are either globular or flattened, according to their seat, and in cases of hypertrophy they assume the shape of the affected organ. They are generally free and well-defined; but when springing from bone they are sessile, and look like excrescences.

6. These tumors may become very large, both in glandular organs and when seated on limbs, especially when they contain much gelatiniform tissue. They are generally surrounded by a fibro-cellular envelope. When a section is made in a recent case the liquid obtained is clear and transparent; but it is sometimes thick and dull, when flocculi or entire lobuli are suspended in it. Besides the textures above mentioned, there is sometimes found in the tumors a substance of pale yellow, and quite dull; sometimes calcareous concretions are found, or else osseous radiations, when the disease begun in the periosteum.

7. Under the microscope, cells with small, rounded, or ovoid nuclei are seen, and all the forms intermediate between the cell and common fibre, especially a great many narrow fusiform bodies; the nucleoli are always very small. There are also perceived original cells with compound nuclei rolled up together, and sometimes fusiform nuclei which then constitute fibro-plastic masses.

8. As regards neighboring textures, fibro-plastic tumors grow like fibrous tumors, as they press upon these textures without taking their place; whilst cancerous tumors substitute themselves in neighboring parts. Fibro-plastic tumors follow, as to their growth, the following development:—There is first a local deposit; the increase is then slow, but soon becomes rapid; phlegmasia takes place; then comes hæmorrhage, partial calcification, softening, the formation of cysts, partial ossification, ulceration, and then, in exceptional cases, sloughing.

9. Both sexes are obnoxious to these tumors; they are seen at all ages, but they arise more frequently between thirty-five and fifty years.

10. Recurrence after operation takes place, especially in autogeneous tumors, and has not been observed in fibro-plastic hypertrophy; recurrence is not observed, as in cancer, to arise in distant organs, though it is often caused by an incomplete operation. Notwithstanding the occasional pertinacity of fibro-plastic tumors to recur in the cicatrix, they are not found to injure the general health. In very rare cases a kind of fibro-plastic diathesis becomes established; this fact has, however, been observed with fibrous, adipose, neuromatous, and melanotic tumors.

11. Singleness and a strictly local nature have been observed as a rule in fibro-plastic tumors. This fact is proved by twenty-six carefully conducted autopsies of cases in which the disease had reached its natural termination, and also by a considerable number of perfect and permanent cures after operation; whilst no such cures are known to exist respecting true cancer.

12. Fibro-plastic tumors have a much more chronic character than cancerous tumors; and save a few cases of very rapid growth, it may be said that fibro-plastic tumors, when they become fatal, last rather more than between five and ten years; whilst the natural duration of cancer is from two to two years and a half. Cases have even been known, and are not rare, in which fibro-plastic tumors have lasted twenty years and more, without much inconvenience. It should, however, be mentioned that these tumors, after a very slow progress, have rapidly assumed a very serious character.

13. Pain is very rarely acute and permanent, and is mostly, as in other tumors, of a neuralgic kind. Functional disturbance depends principally on the seat of the tumor. The general health, in the great majority of cases, remains undisturbed, except in the very rare cases of general fibro-plastic infection, or those in which the local affection has ended in extensive ulceration.

14. The prognosis of fibro-plastic tumors is much more favorable than that of cancer. Curability is the rule. The fibro-plastic texture of inflammatory origin is the more likely to be benign the more it shows a tendency to assume a fibrous character. The prognosis is, in fibro-plastic hypertrophy, likewise favorable. In fact these tumors constitute a local affection little or not at all likely to recur, which can only become dangerous in so far as its seat, extent, or amount of ulceration are concerned. Kelis is likewise an affection of a simple kind, (see "Mirror of Hospitals," The Lancet, vol. ii., 1852, p. 567,) notwithstanding its pertinacity regarding recurrence in the cicatrix after operation. Fibro-

plastic tumors of spontaneous origin are very likely to recur after excision, when they are situated on the tegumentary surface, under the skin, or in the bones. The surgeon should always bear in mind the possibility of general infection, only, however, as an occasional occurrence, but not as a probability. Fibro-plastic tumors seated in the meninges destroy the patient by interfering with the functions of the brain, though remaining all the while a perfectly local affection.

15. The treatment of these tumors should begin with the prolonged use of preparations of iodine, when the origin is of a syphilitic nature, or when the tumor is simply owing to hypertrophy. When an operation is necessary, it should consist, as a rule, of complete extirpation; strong caustics should be tried with superficial tumors of small dimension. Operations in such cases should always be performed boldly, whether the knife be carried into soft parts, or whether the affection be seated in bone. Amputation should be performed when the tumor is situate in the depth of the limb and the former sends prolongations into parts where dissection is difficult.

Autoplasty should be used to substitute healthy tissue to cicatrices likely to favor recurrence, in operations of a moderate extent, and when the tumor is seated on the surface. The actual cautery is necessary when superficial tumors are too extensive to admit of autoplasty.

It is finally advisable to use iodine *after* operations, as a prophylactic means against recurrence of general infection.—*London Lancet.*

Case of Vitiligooidea, with remarks. By W. H. Ranking, M. D. (Cantab.) Norwich.—In the summer of 1850, the following case presented itself to my notice, and a very brief inspection was sufficient to lead me to believe that I had encountered a disease, of which no distinct account had been given by writers on dermatology. I took notice of the case at the time, with reference to publication, but other occupations interfered with my intention, and the circumstance had all but escaped my recollection, when I met with the description of this disease, by Dr. Gull, under the term *vitiligooidea*, the identity of which with my own case could not fail to be recognized. The instances of this curious malady hitherto put on record do not amount to more than five. I have accordingly endeavored to give a succinct account of what is known thereupon.

My patient, Mary B——, a married woman, aged twenty-nine, consulted me, in June, 1850, for obstinate and severe jaundice. Inquiry into her history elicited the facts that her health had been good until three years previously, when, after an attack of dyspepsia, jaundice supervened, and had continued till the time of her visit to me, uninfluenced by treatment, including several salivations. At this time she was universally and deeply jaundiced; but the appearance which immediately and more strongly attracted my attention, was a peculiar deposit on the skin surrounding the eyes, and which, on further investigation, I found to be abundantly distributed over other portions of the body. She informed me that about twelve months ago, spots of this peculiar deposit first appeared on the shoulders, and have since shown themselves on the face, arms,

hands and lumbar regions. In the face, it has assumed a symmetrical disposition, extending along each eyelid, and down the side of the nostrils. On the shoulder the spots are circular and distinctly elevated. Along the inside of the elbows, and on the hands, the deposit follows the flexures of the joints, being flat and linear on the palmar aspect, and more tubercular and rounded on the dorsal. The color of this deposit is of a whitish-yellow, resembling more nearly than anything else the atheromatous patches so commonly found in the aorta. On the face and palms of the hands it is but little elevated; and, as in atheroma, appears to be deposited immediately under the epithelium. On the shoulder and in the dorsal region the spots are circular and prominent, bearing no inconsiderable resemblance to split peas.

At the time of my seeing this case the peculiar affection was still on the increase, fresh spots showing themselves almost daily. They were tender to the touch, and were the seat of a burning sensation, which prevented the patient using her hands without acute suffering.

The history of the jaundice pointed to the conclusion that it depended upon permanent occlusion of the common duct. The woman died soon after my seeing her, under the care of another practitioner, and, as far as I could learn, from severe and rapid peritonitis.

The only references to this singular cutaneous disease which I have been able to meet with are contained in a paper published in "Guy's Hospital Reports;" for although Willan alludes to a rare disease under the term *vitiligo*, which has some points of resemblance, the full comparison of the two is unfavorable to the notion of their identity. The term used by Willan has, however, led Dr. Gull to give to the disease in question the name *vitiligooidea*. The cases narrated by him are four in number. The first is that of a married woman, aged forty-two, who had been deeply jaundiced for two years. At the end of fourteen months this peculiar change in the integument began to show itself on the eyelids, assuming a perfect symmetrical form, as well as in the palms of the hands, where, as in my case, it followed accurately the flexures of the joints. The disease remained stationary till her death.

A second patient was admitted into Guy's Hospital, laboring under diabetes; but in this instance the eruption was so far different in its aspect that I cannot think Dr. Gull justified in associating it with the former case.

The third instance is that of a married woman, like the first, the subject of jaundice. The skin diseases commenced at the end of fourteen months, appearing first on the hands and subsequently affecting the eyelids. This case is now, I believe, under treatment, but the disease shows a tendency to increase rather than diminish.

The fourth case described by Dr. Gull is, in every respect, similar, both as to the prior existence of jaundice, and the distribution of the cutaneous deposit.

I have ventured to call attention to the above singular disease, chiefly on account of its singularity, and not with the expectation of being able to offer any elucidation of its pathology or treatment. To speculate on the former might, until further experience is af-

forded, be an unprofitable exercise; nevertheless, it is impossible to overlook the important fact of some connextion between the cutaneous deposit and jaundice of an aggravated degree and prolonged duration. In every case reported, obstinate and severe jaundice had existed for several months prior to the appearance of the skin malady. Can it be that, like the cretaceous deposits of gout, this was an attempt at elimination of noxious matter necessarily contained in blood, in which was suspended the elements of bile? I regret much that I had no opportunity of instituting a microscopic examination of the deposit; but its *prima facie* resemblance to atheroma would warrant the idea that, like the latter exudation, the peculiar deposit in question contained cholesterine, a principle which is well known to enter largely into the composition of the biliary secretion.

This explanation of the composition and the pathological significance of the vitiligoid deposit is, as we have premised, simple hypothesis; but, such as it is, I would offer it, in order to elicit observations.

Respecting treatment, nothing can be said. If, as I imagine, the affection is but a symptom of prolonged retention of bile, or its elements in the blood, nothing in the way of amendment can be anticipated, unless the original malady be removed, when possibly the absorbents might spontaneously remove the deposit. In the cases hitherto reported no decided amendments followed any of the means adopted.—*London Lancet*, Feb., 1853.

MATERIA MEDICA AND THERAPEUTICS.

On a new source of Kino. By ROBERT CHRISTISON, M. D., V. P. R. S. E., Professor of Materia Medica in the University of Edinburgh.—In a letter of the 20th of last July, from a merchant of Moulmein, Mr. R. S. Begbie, son of Dr. Begbie of this city, I was informed that a species of kino—which seemed to him to present the physical and chemical properties of the commercial variety of that drug in the English home market, and which had been ascertained by a medical friend at Moulmein to possess also its medical virtues—might be largely obtained from a tree abounding in the adjacent provinces. Mr. Begbie added, that he believed "a small quantity had been sent some years ago to England; but as an article of export generally it has not yet been shipped." This notice was accompanied by a small specimen, which is now produced, and which is large enough to allow of its principal properties being accurately ascertained.

As the inquiries I have made lead me to suppose that the article in question is of a very fine kind, and that the fact of its production near Moulmein, and probably over a considerable part of the neighboring province of Pegue, is not hitherto known in Europe, I beg to present to the Pharmaceutical Society the following description of it, and the reasons which induce me to think that it is obtained from the identical

tree which yields in Malabar the present commercial kino of European trade.

The small portion sent by Mr. Begbie consists partly of little angular fragments; but there are several larger masses which are portions of cylinders, about half an inch in diameter, apparently moulded by collecting the juice in reeds. These have externally a greyish, striated surface, most unlike that of the broken fragments of commercial kino. They are easily frangible; and the broken pieces have exactly the appearance of ordinary kino, except that they are even blacker, and more glassy by reflected light; and by transmitted light, though opaque when of very moderate thickness, they are of a splendid cherry-red color in very thin fragments. They are easily reduced to fine powder, which has a dark, dirty, lake tint. Their taste is very slightly bitter and intensely astringent.

Cold water acts more quickly on this kino than on the kino of commerce, gradually dissolving a very large proportion of it, and forming a deep, cherry-red, astringent solution; and there is left a small proportion of greyish flocculent matter, which is slowly soluble in a great measure in boiling water, and which appears to be analogous to the insoluble variety of gum called bassorin. Boiling water dissolves this kino almost entirely, and the solution, when cold, continues nearly transparent for at least an hour; but afterwards it becomes slightly turbid, and a scanty, flocculent precipitate slowly subsides. Both the hot and cold solutions yield, when much diluted, a deep, olive-green precipitate with the tincture of sesquichloride of iron; and when the solution is concentrated, a dirty grey precipitate is formed so abundantly that the whole fluid becomes a thick pulpy mass. A boiling solution in twenty-five parts of water forms with the iron test a pulp too thick to flow, which is one of the characters assigned in the Edinburgh Pharmacopœia to true officinal kino. But I find, further, that a solution in even seventy-five parts of cold water, has a beautiful, intense cherry-red color, and forms with sesquichloride of iron, in the course of an hour, a pulp so thick as to flow only sluggishly.

On comparing these characters with a fine specimen of kino of home trade, and also with a specimen collected in the neighborhood of Goomsoor, in Mysore, by Dr. Cleghorn, of the Madras Medical Service, when he was Surgeon of the surveying corps of that country, I find that the last two are identical, with the single exception, that Dr. Cleghorn's specimen is somewhat redder when seen in bulk; and that the Moulmein kino is blacker, more vitreous in lustre, rather more easily soluble in cold water, and with rather less flaky residue; and when the cold solution is diluted to the strength of one in seventy-five, it requires rather more sesquichloride of iron to throw down all its tannin, and consequently the precipitate forms with the water a somewhat firmer pulp.

This kino dissolves, with only a trace of flaky residue, in rectified spirit, which forms an intense cherry-red tincture of very pure astringent taste. The quantity in my possession is scarcely sufficient to allow of a fuller examination of its chemical properties and composition. But its

physical characters, the action of water, and the properties of the watery solution, even as I have shortly indicated them, are enough to prove that the Moulmein kino is identical in nature with the present kino of home trade, and in point of quality somewhat superior. I have no doubt, from its taste, and the action of the iron test, that an analysis will prove the presence of a larger proportion of tannin.

It does not absolutely follow, even from the exact correspondences now mentioned, that the Moulmein kino is derived from the same botanical source with the present officinal kino of Europe. The officinal sort has been accurately referred by the separate researches of Dr. Gibson, Dr. Pereira, and Dr. Royle, to the *Pterocarpus Marsupium*, of Roxburgh, a fine forest tree abounding in the hills of Mysore and other parts of the Indian Peninsular. But the *Butea frondosa* also yields a fine kino, which I have shown in my Dispensatory to be scarcely distinguishable in chemical properties from the officinal kind.

Mr. Begbie, however, has fortunately supplied me with a description of the Moulmein tree, sufficient to identify it with the true kino tree of Mysore. "It is," said he, "one of the commonest trees in the adjoining provinces, and is called by the Burmese *Padouk*. It grows to a great size and height. Immediately before the rainy season it is covered with long pendant yellow flowers, of an exceedingly sweet odor, like that of jessamine. The tree flowers three times, at intervals of perhaps a week or ten days; each blow lasting about twenty-four hours. The wood is in color like mahogany, and exceedingly heavy. It is used in India for making gun-carriages; and at present we are preparing some for the London market, in executing an order, I fancy, for the Royal Artillery. It makes most beautiful furniture. The gum exudes slightly without incision; but on a cut being made into the tree, it bleeds most freely." This description is not sufficiently botanical to enable me to determine the tree from its characters in botanical works. But on submitting Mr. Begbie's letter to Dr. Gibson, Conservator of the Forests of Bombay, who very lately visited Edinburgh, that gentlemen at once recognizes his old acquaintance of the Indian woods, the *Pterocarpus Marsupium*; which he was one of the first to discover to be the true source of kino, by observing that, when his companions on a shooting party cut their names into the bark of a tree beside which they had been resting, a red juice freely exuded, and concreted into a dark, astringent gum, like the kino of commerce.—*London Pharm. Journ.*, Feb. 1853.

On a New Test for Distinguishing the Russian, Indian, and English Rhubarbs. By Mr. JOHN S. COBB.—The absence of a good test for distinguishing the Russian from East Indian rhubarb has been too much felt and too often expatiated on to require any comment. The want of it has led to a great many analyses, undertaken with a view to the discovery of some constituent peculiar to one or the other species; I am not, however, aware of any successful results having, up to the present time, ensued from these researches, at least so far as concerns the discovery of any reagent capable of distinguishing the varieties of this drug.

Several tests have indeed been proposed, but none of these are to be relied upon. The grittiness, when chewed, caused by the presence of oxalate of lime in the Russian variety, is far from being a satisfactory test. I have met with specimens of Indian rhubarb possessing this quality to a great degree.

Geiger states that "iodized hydriodic acid" gives with a decoction of Russian rhubarb a green tint, with Indian a brownish color, and a deep red with the English rhubarb; but in my hands this test has proved singularly fallacious; with it I obtained a green color with the Russian, a dirty green with Indian, and a sea-green with English rhubarb. Moreover, the color varies according to the quantity of the test added; and if the latter be in excess, any of the varieties when viewed by transmitted light, will seem of a red color. If, however, the solution be subsequently plentifully diluted with water, the green tint is rendered evident.

Thomson remarks, first, that a solution of isinglass gives a more abundant precipitate in the Indian than in the Russian rhubarb; and second, that the decoction of yellow bark gives a more abundant *greenish* precipitate with the infusion of Russian than with the East Indian rhubarb, in the latter of which the precipitate is bright yellow.

These tests do not appear to me to be conclusive. The precipitate caused by the solution of isinglass, gives a bulkier but not really more abundant precipitate in the one case than in the other, as is evident when the precipitate has subsided, and the difference of color in the other test is so small that it requires a somewhat artistic eye to appreciate the distinction, and it certainly would not serve otherwise than as a comparative test. I may incidentally mention here, that in the course of my experiment, I found that the acetate of lead, when ammonia had previously been added, gave with infusion of Indian rhubarb a violet-red precipitate, and one approaching to a brick-red with Russian rhubarb, the precipitate in the latter being of a coarser description than in the former. The same objection, however, applies to this as to the previously cited tests, for any reagent depending for its efficiency on a slight variation in color or bulk, must practically be of little value. Bearing this in mind, I have endeavored to find one not liable to these objections.

The test to which I am about to direct your attention is based on the supposition which I had the honor of suggesting to you some two years since, that the precipitate formed in the tincture of rhubarb is the result of the oxidation of the active principle of the rhubarb. I am not at present prepared to maintain the correctness or inaccuracy of this view, but I am now engaged in some experiments on the subject, which, if satisfactory, I shall have the pleasure of submitting to you on a future day. Starting then with this hypothesis, and remarking that the tincture, when made with Indian, deposited more than with the Russian rhubarb, I thought it probable that an oxidizing agent might exhibit sufficient difference in its *modus agendi* on the species of rhubarb to enable us to identify them thereby. In this, though at first unsuccessful, my anticipations were ultimately realized. If two drachms of simple (*proof*) tincture, of the P. L. strength, be placed in a test tube, and

treated with one drachm of a mixture of equal parts of nitric acid and distilled water, the following results will take place:—

East Indian soon becomes cloudy, and in from five to twenty minutes is turbid.

Russian remains unchanged for three or four hours.

English loses its brightness in half an hour; on holding it before a light a precipitate may be seen diffused through it.

If, instead of ʒij. of tincture, one of tincture and one of water be used, the test as regards the Indian is still more prompt, but the difference between the English and Turkey not so clearly defined.

There are one or two precautions to be observed in the application of this test: the dilute acid should be gradually added, the test tube being shaken in the meantime. Again, if rectified tincture or strong acid be used, very equivocal results are obtained. My first experiments were made with strong acid and rectified tincture. The results were excellent, as far as regarded three or four samples; but when I came to essay another, the very reverse of the former experiments took place. I thought at first that the samples of rhubarb could not be rightly marked, but on again returning to the former samples, they also gave contradictory results. I procured other samples, but ultimately discovered that this anomalous reaction was due to the time the nitric acid was left in contact with the supertangent film of tincture, in which it seemed to set up a sort of fermentation, which, after the two were mixed by agitation, propagated itself throughout the liquid. Thus, if two drachms of tincture of East Indian rhubarb be placed in two separate test tubes, held in the hand, and the acid added; if the tube to which the acid is last added be immediately agitated, and then the other treated in a similar manner, the one will shortly let fall a ropy deposit, while the other remains clear. By using the dilute acid and proof tincture these fallacies are avoided.—*Lond. Pharm. Journ.*, Feb. 1853.

SURGERY.

Coagulation of the Blood in Arteries for the Cure of Aneurisms.—By Dr. Pravas of Lyons. The plan which Dr. Pravas proposes consists in coagulating the blood in the arterial vessels by the injection of a few drops of a concentrated solution of perchloride of iron. This is done with either a gold or platinum trocar, very finely pointed, introduced obliquely through the walls of the vessel with a rotatory sort of motion. The instrument being furnished with a syringe, and the piston worked by a screw, so that the injection would not be thrown in jerks, and the quantity of liquid used measured accurately. Besides, the circulation in the vessel must be temporarily stopped, and some other precautions taken, which will be mentioned directly, after an account of the experiments performed.

1st. The carotid of a sheep having been exposed, the current of blood was interrupted by the finger and thumb, at two points distant one inch and a half or two inches; about a spoonful of blood was thus enclosed.

A puncture was made very obliquely in the walls of the vessel, and three or four drops of the perchloride of iron injected. For this purpose two turns of the screw were made, each turn ejecting about two drops of the fluid. Immediately after the injection of the salt, an increase in the density of the blood could be felt, and a clot forming rapidly. In four minutes the vessel could be left to itself, leaving off all compression; in fact, the clot did not change its position, and it could be felt in the same place for eight days subsequently.

2nd. A similar experiment performed on a horse gave the same result. The portion of the artery in which the circulation had been suspended was about three inches long, and could contain five teaspoonfuls of blood. Eight or ten drops of the solution were injected, Dr. Pravas having observed that it took nearly two drops of the solution to coagulate a teaspoonful of blood. In four minutes in the horse, as well as in the sheep, the clot was fully formed; it was firm and resisting, and was not displaced by the impulse of the blood for a quarter of an hour, at the end of which time that portion of the vessel subjected to the experiment was cut out and split; the inner surface was rough, and showed granulations and longitudinal striæ along the whole length occupied by the clot.

3rd. In another horse, a similar experiment was performed, with exactly similar immediate results, except that this animal was preserved for eight days, leaving the vessel exposed, so as to watch the progressive changes. It was observed that the induration of the carotid extended above and below the formative clot. At the end of eight days the horse was killed, and on examining the interior of the artery, three distinct clots were seen, which caused its obliteration for about eight inches and a half in extent. The middle clot corresponded to where the injection was introduced, and had a darker-colored and granular appearance, about an inch and a quarter long.

Resumé: After the injection of the perchloride of iron, four minutes and a half were sufficient to cause a clot in the carotids of these animals so consistent and adherent as not to be displaced by the impulse of the column of blood from the heart.

The above experiments have been witnessed by M. Lallemand, and M. Le Coq, directeur de l'Ecole de Lyon. Dr. Pravas is still pursuing his researches, and has made these first results public, so as to draw the attention of experimentalists and practitioners to this plan of obliterating arteries. So far, his observations have been purely experimental, and instituted in such a way as to prove directly the mode of action of the coagulating agent he employs. As to its application for the cure of aneurism in the human subject, the proceeding ought to be thus modified: it is into the aneurismal sac that the solution ought to be injected, having previously arrested the circulation below the sac—that is, between it and the capillaries. The quantity injected should be in proportion to the size of the sac, and the compression below should last four or five minutes. This, in Dr. Pravas's opinion will be sufficient to form an extensive clot, capable of plugging the artery and producing the same effect as ligature.—*Dublin Med. Press, from Presse Méd. Belge.*

On the Manufacture of Sponge Tents. By Dr. Digby.—[The following directions are given:] "A piece of tolerably fine sponge, previously well dried, should be soaked in Mistura Acaciæ, and rolled up into a cylindrical form, somewhat in the shape of a small segar, tapering to a point at one end. The other, or thick end, must be rolled round a middling-sized awl, partly for the purpose of a leaving a central perforation into which the end of the instrument which carries it is to be inserted, and partly to fix it, while a piece of stout cord is wound tightly and closely around it from the thick end up to the point. By this means, the sponge is powerfully compressed into the cylindrical form above mentioned, and if well-dried, becomes as hard as a piece of wood, and retains its compressed state perfectly when the cord is removed. Any little projections or roughnesses may be trimmed off with a sharp knife; and, lastly, the tent is to be dipped several times in melted tallow, rendered harder by the admixture of a little white wax, until it has become thickly coated. A piece of string or tape is fastened to the lower or thicker end, to assist in removing it from the os uteri when expanded. The heat of the part soon melts the unctuous covering, and thus enables the tent to slide up in its own grease as it gradually melts, when otherwise it might have been difficult to introduce it. The secretions of the part slowly pervade the sponge, and dissolve the hardened gum with which it has been soaked, and the sponge gradually expands as it returns to its full size.

"Twelve hours is usually a sufficient period to affect this in; and the degree of dilatation produced will guide us to the introduction of a larger tent on the removal of the first."—*Med. Times.*

ANATOMY AND PHYSIOLOGY.

On the Muscles which open the Eustachian Tube. By Joseph Toynbee, Esq., F. R. S.—The author commenced by alluding to the opinion generally held by anatomists, viz:—That the guttural orifice of the Eustachian tube is always open, and that the air in the tympanum is constantly continuous with that in the cavity of the fauces. An examination of the guttural orifice of the tube in man and other animals has led the author to conclude, that, except during muscular action, this orifice is always closed, and that the tympanum forms a cavity distinct and isolated from the outer air. The muscles which open the Eustachian tube in man are the tensor and levator palati, and it is by their action, during the process of deglutition, that the tubes are ordinarily opened. That the act of swallowing is the means whereby the Eustachian tubes are opened, is shown by some experiments, of which the following may be cited:—If the mouth and nose be closed during the act of swallowing the saliva, a sensation of fulness or distension arises from the air, which is slightly compressed in the fauces, passing into and distending the tympanic cavities. Upon removing the hand from the nose, it will be observed that this feeling of pressure in the ears does not disappear, but it remains until the act of deglutition is again performed, while the

nose is not closed. In this experiment the Eustachian tubes were opened during each act of deglutition; during the first act, while they were open, air was forced into the cavity of the tympanum by the contraction of the muscles of the fauces and pharynx, and the guttural orifices of the tubes remained closed until the second act of swallowing, which opened the tubes, and allowed the air to escape. That the act of deglutition opens the Eustachian tubes was inferred also from the custom usually adopted of swallowing while the descent in a diving-bell is performed; by this act the condensed air is allowed to enter the tympanum, and the sensation of pain and pressure in the ears is removed or entirely avoided. The author gives an account of the Eustachian tube and its muscles in mammalia, birds, and reptiles. In some mammalia the muscles opening the tubes appertain as in man to the palate; in others, this function is performed by the superior constrictor muscles of the pharynx. In birds it is shown that there is a single membranous tube into which the two osseous tubes open; this membranous tube is situated between, and is intimately adherent to, the inner surface of each pterygoid muscle, and by these muscles the tube is opened. The conclusion to which the author arrives respecting the influence of the closed Eustachian tubes, is, that the function of hearing is best carried on while the tympanum is a closed cavity, and that the analogy usually cited as existing between the ordinary musical instrument the drum and the tympanum, to the effect that in each it is requisite for the air within to communicate freely with the outer air, is not correct. On the contrary, the author shows that no displacement of the air is requisite for the propagation of sonorous undulations, and that, were the Eustachian tubes constantly open, these undulations would extend into the cavity of the fauces, there to be absorbed by the thick and soft mucous membrane, instead of being confined to the tympanic cavity, the walls of which are so peculiarly well adapted to the production of resonance, in order that they shall be concentrated upon the labyrinth.

In corroboration of the above views, the author states, that in cases of deafness, dependent simply upon an aperture in the membrana tympani, whereby the sonorous undulations are permitted to escape into the external meatus, the power of hearing has been greatly improved by the use of an artificial membrana tympani, made of very thin vulcanized India-rubber or gutta percha, which is so applied as again to render the tympanum a closed cavity.

OBSTETRICS.

Extraordinary Case of Mortification, occasioned by Pregnancy. By SAMUEL L. HAMILTON, M. D., of Chattooga county, Georgia.—Mrs. S., aged twenty years, during the sixth month of her second pregnancy, was attacked June 5th, 1848, with remittent fever, which readily yielded to ordinary treatment. After this she did well for twelve or fifteen days, during which time nothing of importance occurred, but she was perhaps unusually hearty, which I attributed to her condition.

On the morning of the 20th of June I was again called to see her,

and found her with extreme pain in the toes of her right limb, which was so cold half way to the knee as to yield to the hand when applied the same sensation as that of a dead body. There was little or no excitement of the pulse; nor was there any evidence of disease in the general system. The pain in the foot increased from day to day, until the cries and shrieks of the unfortunate sufferer were almost too intolerable to be borne by her surrounding friends. It cannot be said that she was entirely easy until her delivery, except while under the influence of large doses of morphine, from the effects of which she would frequently awake in violent pain. Her sleep was evidently not profound, under as large doses of the above medicine as it is thought prudent to administer under any circumstances. It was attempted, but in vain, to restore the lost temperature of the extremity—every thing was used that would promise this result, without vesicating the skin, which was avoided, notwithstanding the repeated solicitation of friends for the application of a fly-blister. There finally appeared large yellow blisters upon the diseased surface, which, on being ruptured, discharged a serous fluid. It was evident, after this, that there was not sufficient vitality in the skin to warrant recovery. The skin and all the soft tissues now began to slough, until the ligaments of the metatarsal articulations were destroyed—at this point they were separated, which gave the patient some slight relief. The temperature of the limb was partially restored from above, down to within a short distance of the ankle-joint; the pain, however, continued unabated till labor came on, when it then entirely ceased. The lady was then delivered of a large child, after which there was not the slightest return of pain. The labor was in all respects natural—the stump of the extremity, which had been suppurating, now readily healed—the woman recovered, and has since given birth to two children, without the slightest return of the affection.

I was constrained to the opinion that this extraordinary case was the result of pressure of the gravid uterus upon the arteries and nerves passing through the pelvis—viz., the ext. iliac artery and the great sciatic nerve, whose extremities supply nutrition and innervation to the disorganized part. From the history of her previous pregnancy, it appeared that there had been running ulcers from about the sixth month until delivery; the cicatrices were still perceptible, and occupied the regions covering the posterior and anterior tibial arteries. I think it a reasonable inference, that the pressure was exerted upon the nerves, as well as the arteries, from the intense and continuous pain which nothing could relieve until the removal of the cause, when the suffering simultaneously disappeared.

As to the treatment of the case, opium may have given some temporary relief. Position was tried without the least success. Supporters were also tried with the same result. We would feel inclined, however, were we called to treat another case, to try more thoroughly both supporters and position. We might particularize as to local applications, &c., but they were such as common sense would dictate, and failed to afford any relief—we therefore omit their tedious detail.—*Southern Med. and Surg. Journ.*

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THE

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ORIGINAL COMMUNICATIONS.

Zoonomia: or the Law of Animal Life. A Lecture delivered at the Smithsonian Institute, Washington, U. S., on March the 8th, 1853. By MARSHALL HALL, M. D., F. R. S., Foreign Associate of the "Académie de Médecine" of Paris, &c. &c.

GENTLEMEN,—I congratulate myself on the opportunity afforded me, by your kind invitation, to unfold a principle in physiology on which I have long meditated and experimented, and which I have ventured to designate the Law of Animal Life.

Many have been the attempts to define *life*. All have, I think, proved abortive. I shall not, in my turn, venture to attempt that in which so many have failed. My object will be rather to describe than to define.

Life, then, may be justly viewed as consisting in a comprehensive system of action and re-action—of the action of certain physical and chemical influences, and the re-action of certain vital powers in organized beings.

Throughout the animal, and, indeed, the vegetable kingdoms,

the *primary* organic agents and re-agents are *pollen* and *ova.* Life first consists in the reciprocal action of these upon each other. Such is the very type and essence of life in its earliest dawn. Harvey said—Omne vivum ab *ovo.* He might, with equal truth, have said, Omne vivum a *polline;* and with still greater truth, Omne vivum a polline *et* ovo.

Each of them—the pollen, the ovum—was originally a *creation.* Their mutual and reciprocal action is a phenomenon which the Creator has impressed on this portion of His works, as the *fiat* of His will.

That this action *is* perfectly reciprocal, is proved by the resemblance of the new being or offspring—be it animal or vegetable—to *both* parents. The event is at present as inscrutable in its nature and essence, as it is interesting to the physiologist and philosopher as a subject of observation and new inquiry.

Why *this* seed of the Triticum Indicum, or Indian corn, on which pollen has fallen, should, if planted in soil and exposed to the genial influences of heat and moisture, become a noble and useful plant; and this other, to which, from its mode of growth and treatment, no pollen has been allowed to have access, shall, under similar circumstances and influences, undergo decay and decomposition, who can tell? Why *this* egg, which has been fertilized by pollen, should, under similar genial influences, become a bird, and eventually soar into the regions of the atmosphere; and why this other, unaffected by pollen, should pass into a state of putrefaction, who can declare? Who will attempt to explain why those "divinæ particulæ auræ," which exist in the form of pollen, can alone vivify these ova? Who can say *what* there is in these ova, and *what* there is in the appropriate pollen—for the *two* are *equally* essential—which develope growth, and form, and *life?*

Look at these ova and on these seeds. On *this* ovum and on *this* seed no pollen has ever been shed. They will, though placed in circumstances the most favorable for developement, only pass the more readily into decay. But this other ovum, this other seed, on which pollen, life-giving pollen, has shed itself, will, under similar circumstances, germinate and pass into life, the whole subsequent being being expressly imbued with the equally inscrutable properties of the pollen, and of the ovum or seed.

What is the condition of this pollenized, this fructified ovum or seed *before* active life begins? Is life in abeyance? or is it in actual existence only in its lowest and imperceptible form? Have eggs and seed a temperature of their own, above that of the medium in which they are placed? And what is the condition of this *offset* of an animal or animalcule, (as the planaria,) or of this plant? Both will continue to live independently of the original stem. Both may be multiplied and propagated by new and similar offsets. Both are, as I have stated, equally imbued with the properties, both of the original pollen and ovum. All this is mysterious, inscrutable in its essence, constituting one of the arcana of nature, which may long, may forever be hidden from us.

But the *laws* of life, and those of the material and inorganic world, may be detected, and their detection and investigation are amongst the most legitimate, interesting and important objects of philosophical inquiry. At present I beg only to state, that whilst pollen places the ovum or seed under *vital* influences, its absence allows them to become the prey of mere physical or chemical agencies alone.

The further essential and distinctive characteristic of organized beings, that in which they differ from the objects of the inorganic world, is—*membrane*. Through this membrane, a special function of transition takes place, constituting endosmosis and exosmosis, or imbibition and exudation.

If this membrane be injured, or broken down, the materials of organized beings are again immediately subtracted from the laws of organization, and delivered over to the ordinary principles of chemical action—decay, or eremacausis—from which that membrane had preserved them, whilst it placed them under the dominion or modification of vital influences. Examples of this fact are afforded by bruises of animal or vegetable tissues, which, if slight, are repaired by the vital powers; but if severe, lead to death or decay. How extraordinary are the changes which almost immediately take place in bruised flesh, or in a bruised orange or apple!

But I must hasten from these preliminary views, and pass on to the more express subject of this lecture. All living beings,

from the serpent to the eagle, possess, in common, peculiar *dynamic* properties; in all, these properties respond to appropriate external and internal *stimuli*. On the reciprocal play, action and re-action, of those forces and agents, life, with all its varied phenomena, in all its varied forms, essentially depends.

These dynamics and these stimuli bear a relative proportion to each other; this proportion is *inverse*; the higher the dynamic, the lower the stimuli, and *vice versa*. *Such is—the Law of Animal Life.*

In the animal kingdom, *two* forms of dynamics exist; the first has its seat in the nervous system, or, more definitely, in the spinal and ganglionic sub-systems; I venture to designate it by the term *neuro-dynamic*. The second has its seat in the muscular system; it may be designated *myo-dynamic*. The stimuli exist in greater numbers, for they consist in physical and chemical agents of the external world—such as air, food, water, heat, light, the galvanic influence, &c.

I must introduce the subject of the vital dynamics by showing those who are not familiar with physiology, an experiment full of the deepest interest; I place before you a frog, prepared for the purpose, and you will observe how the most elevated principles of philosophy may be illustrated by what you may deem the humblest objects of creation. The physiologist knows and feels that his science, elevated as it is, is included in the most insignificant insect that lives—the caterpillar or the butterfly.

The nervous system consists in *three* sub-systems; the first is that in which the brain, or cerebrum, is the centre, and sensation and volition are the special functions; I have removed this centre and these functions from this frog, by removing the head, and, with it, the very centre of the system, or sub-system, itself; the creature is thus entirely deprived of sensibility; the idea of suffering is excluded. It is also deprived of volition—all *spontaneous* movements are impossible.

Yet there *is* a source and power of movement remaining, for you observe the effect of irritation of the integument covering the toe or foot. This power resides in the spinal marrow, or spinal centre, and certain nerves proceeding *to* it and *from* it, termed therefore, eisodic and exodic. I have designated this power neuro-

dynamic; it was formerly termed the *vis nervosa*; its English appellation would be *nerve*-power.

The nerves which proceed *to* the centre of this spinal system, *arise* from the skin. I have removed them from the left foot, and you will observe that the same irritation which, applied to the right foot, induced contraction of the muscles, is inoperative when applied to this wounded limb; in effect, the *origin* of the eisodic nerve has been removed with the integument.

But I now irritate the spinal centre itself: you observe the convulsions produced.

Lastly, I irritate these, the lumbar nerves; they are exodic, and proceed to the muscles: again the limbs are violently agitated by movements.

These, then, are phenomena arising out of irritation of the nerves, eisodic and exodic, and the centre of the spinal system. They attest the neuro-dynamic power of those several nervous tissues.

But there is still a third sub-system of the nervous system; it is termed the ganglionic, and it is connected with all that is *interior*, or *within* us. I have here placed aside the viscera of the frog, and with them the ganglionic sub-system belonging to them—the heart, the stomach, the intestines, &c. If you were nearer, you would see the heart pulsate, and the stomach and intestines move by what is termed peristaltic action. These phenomena are effectible through the medium of the ganglionic portion of the nervous system, in which the neuro-dynamic must also reside.

But besides the power residing in the nervous tissues, there is, as above stated, another dynamic. Its seat is the *muscular* tissue; for which reason it may be designated the *myo-dynamic*. You observe the effect of a very slight galvanic influence passed along this muscle; the muscle is immediately vigorously contracted. This is the vis muscularis of physiologists, the *muscle*-power.

I must again hasten away from this explanation. I repeat that these vital dynamics, and the physical and chemical stimuli to which I have alluded, bear an inverse ratio to each other. This is the case both primarily and secondarily; the first, by creation; the second, by a natural operation and *effect;* for if stimulus be diminished, the dynamic becomes augmented: and if

the stimulus be augmented, the dynamic becomes exhausted, and, in some degree, proportionately reduced, as natural events, causes and effects. Thus the effect of hibernation, during which the stimuli of air, food, temperature, and nutrition, are reduced to their minimum, is to lead to augmented dynamic and excitability, and to what may very appropriately be designated, *vernation*, or the activity of spring; whilst the effect of the augmented stimulus in the summer months, that is of augmented air, food, temperature, and nutrition, is to exhaust or lessen the dynamic of nervous and muscular fibre, however they may augment general activity and power of mass, and prepare the way for the next winter's sleep.

By creation, and the operation of natural causes, then, the inverse ratio between dynamic and stimulus, in animated creation, is—the Law of Life.

The attempt to invert this law in either direction, and *equally* in either direction, is to destroy life. Unduly to augment the stimulus when the dynamic is high; or unduly to diminish the stimulus when the dynamic is low, is equally to interrupt the vital actions.

I will again illustrate my subject by a reference to the interesting case of hibernation:—If you take a bat from its winter quarters, from its state of hibernation; in which its respiration is at the minimum, and its dynamic at the maximum, and make it fly about, and so augment the vital stimulus of respiration, it infallibly *dies!* If, on the other hand, you take the same creature in its condition of summer activity and of high respiration and low dynamic, and deprive it of air, by immersion in water or in an irrespirable gas, it dies, too. Invert in either way the inverse ratio of dynamic and stimulus, and the result is fatal.

Low dynamic *requires* high stimulus; high dynamic, low stimulus. The higher the dynamic, the more capable is the animal of the further abstraction of stimulus, and *vice versa*. If, instead of taking a bat from its summer activity, you take it in its state of hibernation, and now immerse it in water for ten minutes, or even longer, it is altogether uninjured. The bat taken in its state of activity, and submerged in water, dies in two minutes and a half.

Thus the hibernating animal dies if its respiration be augmented whilst it can bear its suspension; the same animal, in its state of vernation, or of activity, can bear its respiration to be augmented, but dies speedily if it be suspended!

I will illustrate this view by another order of facts:—the tadpole of the frog breathes in water, and feeds on water plants; the same tadpole becomes a frog, breathes in atmospheric air, and feeds on insects; it has become a higher breather—a higher feeder. In the former state, the dynamic, in the latter, the stimulus, is comparatively greater. The tadpole would die if taken out of its element, the water; the young frog would drown if compelled to remain in it!

These facts are the results of innumerable experiments. I shall take occasion to revert to them hereafter.

Besides being *inverse*, to which there is no exception, the *ratio* between dynamic and stimulus may be higher or lower. It is in this manner that we are enabled to explain the *modes* of life. As life in general is a result of stimulus *into* dynamic, we should, without a provision of this kind, see all animals *equally* active or inactive. Either the reptile would not creep slowly, or the bird tribe would not soar into the atmosphere. But we observe, in fact, that when the stimulus is *dis*-proportionately low, the animal is of low activity; and that when it is *dis*-proportionately high, the animal is in the enjoyment of an intense degree of activity.

Throughout animated nature, as I have already stated, in all the varied forms and modes of life, from the eagle to the serpent, the dynamic and the stimuli are in an inverse ratio to each other. Such, as I have observed and repeated, is the law of life. In the bird-tribes, the quantity of air and food imbibed is extreme, the degree of dynamic very low; in the reptile tribes, the quantity of stimulus is low, and the degree of dynamic high. The following formulæ may serve to express this general fact:

Stimulus,	8	4	2	1
Dynamic,	1	2	4	8

The degree of activity, or of inactivity, in all these cases may be supposed to remain the same.

But to explain the greater activity of the bird, and the inactivity of the reptile, a modification of the formulæ is required, which may be thus expressed:

Stimulus	1	2+1	4+2	8+4
Dynamic	8	4	2	1

In this manner, whilst the inverse ratio between the stimulus and the dynamic, generally speaking, remains, that of the former may *augment* more rapidly as we pass into the more active forms of living beings than that of the latter *diminishes*; and thus the bird and the insect fly, whilst the reptile and caterpillar creep. With higher stimulus, the animal becomes more bird-like; with lower stimulus, it becomes more reptile.

With augmented air and food, other organs besides those of respiration and digestion become stimulated to greater action. There is especially a correlation between the rapidity of the action of the heart and of the acts of respiration arising in a peculiar and reciprocal manner out of the play of stimulus and of the neuro-dynamic which resides in the spinal and ganglionic sub-systems, and the myo-dynamic in the muscles which are respectively under their dominion, and out of the law which binds them together, which deserves to be distinctly described: The blood flowing through the lungs exhales carbonic acid; this is the internal excitor of inspiration acting on the fine branches of the pneumogastric nerves spread over the lining membrane of the lungs; the more rapid the circulation, the greater the quantity of carbonic acid exhaled, and consequently the more rapid the respiration. But this respiration brings the oxygen of the atmosphere into contact with the pneumonic blood in its turn, through the same pulmonary membrane; this oxygen is absorbed by the blood, passes into the circulation, and stimulates the heart to augmented action, and augments the rapidity of the circulation. This last has again, in its turn, a greater exhalation of carbonic acid in the lungs, again augmenting respiration; &c. In proportion to the augmented stimulus the dynamic is diminished.

The *changes* which take place in regard to the ratio of dynamic and stimulus are of *two* kinds: 1, *structural;* 2, *physiological.* The former, in metamorphosis, is usually, if not always, upwards, *to* a state of higher activity, to a state of higher stimulus with diminished dynamic; the latter takes place in both directions, being to one of higher stimulus in vernation, and to one of higher dynamic in hibernation. Activity on one hand, and repose, and,

especially, sleep, on the other, *induce* similar though less marked effects.

I think I have said enough to convince you, gentlemen, that there is, in this Law of Life, a most interesting and important fact, a vast generalisation. This generalization embraces *three* great objects: 1, the scale of animated being; 2, metamorphosis and perhaps mere development; 3, physiological changes. I know of no law so general, so expansive.

I may now observe that it is of deep interest to trace the *criteria* of the ratio between dynamic and stimulus.

In the first place, galvanism is a test of neuro- and myo-dynamic, just as nerve and muscle, in the animal in which these dynamics are high, as the frog, become galvanoscopic or a test of galvanism.

In the second place, in the animal in which stimulus is high, the temperature and its measurer,—the thermometer,—become a test of its degree, and, of course, of the inverse condition of the dynamic.

Thirdly, the degree of activity or of inactivity denotes the relative condition of the two elements of the Law of Life.

Fourthly, it has already been noticed that, in proportion to the dynamic, and in the inverse proportion to the stimulus, the animal possesses the power of bearing the subtraction of stimulus, the privation of air and of food, and is, in more senses than one, endowed with *tenacity of life*. The length of time during which an animal can bear the privation of air, or breathe a given limited quantity of air, is proportionate to the dynamic.

In the fifth place, the quantity of respiration affords a measure of the stimulus. This is ascertained in various ways: 1, by the structure and extent of the *lungs;* 2, by the number of the respirations; 3, by the quantity of oxygen imbibed and of carbonic acid exhaled.

In proportion to the *surface* of the lungs on which the methæmatous or blood-changing channels are spread, in proportion therefore to the complexity of the structure of the lungs, is the quantity of respiration. The fish has a mere gill; the batrachian has a vesicular lung, with or without subdivisions or intersections, as we observe in the triton, or in the frog or toad, respectively; the lung of the serpent, the tortoise, the tribes of

the mammalia and of the birds, becomes more and more complex and extended; in the insect and in the bird, the respiration is extended over the system, not being limited to one organ; in the insect, indeed, each articulate segment is furnished with an analogue of the medulla oblongata, as a central nervous organ of the respiration. The dynamic exists in an inverse proportion.

In the sixth place, the quantity of food assimilated or respired is a stimulus in itself, and in its proportion to respiration becomes a measure and criterion of the degree of dynamic inversely. In speaking of the quantity of stimulus as represented by the food, we must bear in mind the quality as well as the quantity of that food, and its convertibility into calorifacient and nutrient principles. *Insect* food is perhaps of all kinds of food the most stimulant, whilst vegetable food is the least so. It must also be a question how much of the food is really made available, and how much is excreted unrespired, unassimilated.

Seventhly, we have in the circulation a criterion of the kind and character of life; slow and with few methæmatous vessels, in the animal of low stimulus and high dynamic, it becomes quicker with more crowded vessels as the stimulus is greater. The structure of the lung and the degree of rapidity of the movement of the blood globules, must be carefully noted: as the former becomes more complicated and the latter augmented, the quantity of stimulus is higher, and, I need scarcely say, the degree of dynamic lower.

There is, indeed, no subject so replete with interest as the circulatory apparatus—pneumonic and systemic—in themselves, in the different orders of animated being, and in reference to the law of life. The entire apparatus consists of—1, the minute arteries; 2, the minute veins; and, 3, the intermediate blood-channels, or, as I have proposed to denominate them—from the important fact that all the changes which take place in the blood take place in them—the methæmatous or blood-changing channels. These vessels are specifically distinct, a distinction on which I have insisted on another occasion.

I must now, Gentlemen, in the last place, bring before you certain *results* of that law of life which I have thus very inadequately sketched. In doing this, I shall be compelled to repeat

some of the preceding remarks; but I prefer to do this to the alternative of leaving my sketch incomplete.

The first remark I have to make in regard to the results of the Law of Life, relates to the temperature of animals of high dynamic and of low respiration, and consequently of low temperature. Such animals are said to be of *cold blood.* This expression is inaccurate. No animal is positively of cold blood. The species of lowest temperature is still of a temperature higher than that which would subsist absolutely without respiration, and its blood is only *low* in temperature, without being as cold as the surrounding medium.

Even amongst fishes some are high, others low, feeders and breathers, with a corresponding temperature; the trout can only live at the surface of a limpid stream, breathing highly oxygenated water, and feeding on the insects immediately on that surface; the carp, on the contrary, lives and breathes lowly, at the lowest part of stagnant pools. The trout is, comparatively, a fish of high stimulus—food and respiration—and temperature, and of low dynamic; the carp, of high dynamic and low stimulus. The trout dies almost immediately if taken out of its crystal element; the carp will live for days in wet moss, that is, out of its own element, abundantly supplied with moisture, or in a limited portion of water ill supplied with mixed atmospheric air.

As we rise in the scale of animated being, from the fish to the reptile, from this to the mammalia, and from these to birds, the respiration, and, with this, the temperature, also rises, the dynamic proportionately falling; the temperature of the fish and reptile is slightly above that of the medium in which they dwell respectively; that of the mammalia is about 98°, that of the bird tribes about 102°, Fahr.

The temperature accurately coincides with the quality and quantity of food, the quantity of respiration, and is, in effect, the developement of an internal stimulus from stimulant ingesta.

With temperature there is also probably the evolution of the galvanic agency.

The galvanic apparatus, the thermometer, the quantity of food, the quantity of oxygen, the power to bear the abstraction of these stimuli, or, in certain circumstances, their addition; all these are criteria of the place a given animal, in a given condition, ought to occupy in the zoological or physiological scale.

Growth, development, metamorphosis, nutrition, in ovo and extra ovum, are other results of the play of vital powers, dynamic and stimulus. With each of such changes in form, a change in kind of life, or a metabiosis occurs.

Of these, hints have been dispersed in the preceding remarks. If I have succeeded in giving you, Gentlemen, an adequate idea of them, and of the other topics involved in the development of the Law of Life, I shall feel much gratified. Pray accept my best thanks for your kind attention throughout this imperfect lecture.

Each part of my subject would afford scope for distinct discussion, and one object of my visit to the United States is to secure to myself both the leisure and the opportunity for further physiological inquiry in regard to it. In this object I know and feel that I shall be assisted by the liberal and generous people amongst whom it is my lot, for a time, to dwell, and by the noble and free institutions, the objects of which it may, as on the present occasion, be my proud privilege humbly to promote.

Of the Smithsonian Institute I can only most cordially say, may it prosper, and may it long be the means of the diffusion of knowledge, and of consequent good to mankind!

Experimental Researches applied to Physiology and Pathology.

By E. Brown-Séquard, M. D., of Paris.

(Continued.)

XXVIII.—INFLUENCE OF RED BLOOD ON MUSCLES AND NERVES DEPRIVED OF THEIR VITAL PROPERTIES.

James Phillips Kay* has found that blood, injected into limbs of dead animals, just after irritability has disappeared, is capable of regenerating this vital property. I have gone much farther, and have discovered that blood is able to regenerate the vital properties of nerves and muscles, even in limbs which have lost their irritability and have been rigid for several hours. I have obtained this result from the following experiments:

1st. On the body of a rabbit, in which cadaveric rigidity had already existed for 10, 20, and in one case, 33 minutes, I divided the aorta and the vena cava in the abdomen, immediately

*Treatise on Asphyxia. London, 1834

above the bifurcation of these vessels. By means of small tubes, a communication was established between their peripheric extremity and the central extremity of the corresponding vessels divided in a living rabbit. The blood of this living animal circulated immediately in the posterior limbs of the dead one. After about six, eight or ten minutes, rigidity disappeared, and, a few minutes afterwards, movements took place when I excited the muscles or the muscular nerves.

2d. I have obtained a like result from an experiment more easily made than the preceding, and which I have performed more frequently. I divided transversely the body of a living guinea-pig, or rabbit, into two halves, on a level with the lower border of the kidneys, leaving no communication between the two halves, except by the aorta and the vena cava. I then tied the aorta immediately below the origin of the renal arteries. The muscular irritability gradually diminished, and in a very variable length of time* it gave way to cadaveric rigidity. I waited until rigidity had been fully developed in all the muscles, and then the ligature was relaxed and the circulation re-established. Rigidity disappeared slowly, and the muscles and the motor nerves resumed their vital properties.

3d. In order to ascertain if voluntary movements and sensibility could be restored to limbs that had been in a state of cadaveric rigidity, I tied the aorta immediately behind the origin of the renal arteries, in several rabbits. Shortly afterwards, sensibility and the voluntary movements disappeared in the posterior limbs. I waited until muscular irritability had given way to what is called *cadaveric* rigidity; and when that peculiar rigidity had existed for at least twenty minutes, I relaxed the ligature. Then circulation took place, and, in consequence of it, sensibility and voluntary movements re-appeared.

From this experiment it results, that not only local life, but all the properties and actions of full life, can be restored in limbs that have been in the state called *rigor mortis, cadaveric or post-mortem rigidity.*

4th. On a man, 20 years old, who was guillotined on the

* Sometimes 30, 20, or even only 10 minutes in weak animals, and from 1 to 8 or 9 hours in strong animals.

18th of June, 1851, in Paris, I made an experiment similar to some of the preceding. The decapitation took place at 8 o'clock A. M. Ten hours afterwards, *i. e.* ten minutes after 6 o'clock P. M., the muscles of the hand, upon which I intended to experiment, exhibited some slight manifestations of irritability. At 7 and at 7¼ o'clock P. M. I ascertained that they had lost their irritability. Shortly after they were in a state of cadaveric rigidity.

I began the injection of blood 10 minutes after 9 o'clock P. M.

As I wished to inject fresh human blood, and as I could not obtain any from the hospitals at such an hour, I was obliged to make use of my own. My friends, Drs. F. Bonnefin and Deslauriers, drew from one of the veins of my left arm half a pound of blood, which was immediately beaten and completely defibrinated and filtered through a cloth.

As, in opposition to the general opinion, I had found that it is not necessary, in transfusion, to make use of blood at a temperature not far from that of warm-blood animals, I left the blood employed in this experiment freely exposed to the atmosphere during all the time of the operation. The temperature of the air was 19° centigr. (66°·2 Fahr.) I regret not having taken the temperature of the blood when I began to inject it, but it was probably about the same as that of the atmosphere.

The injection was made into the radial artery, a little above the wrist. The whole quantity of the blood was injected in about 8 or 10 minutes. The arm operated on had been separated from the body, and the blood injected came out from all the divided arteries and veins.

Having saved nearly all the blood which flowed from these vessels, I injected it anew. The last injection was made 45 minutes after 9 o'clock P. M. Ten minutes afterwards I found that cadaveric rigidity had ceased in the hand, and that two muscles only, out of the nineteen existing in that part, had not resumed their irritability. Three muscles had become so very irritable that a slight mechanical excitation was followed by a contraction in the whole length of their fibres.

At half past one o'clock A. M.,—seventeen hours and a half after decapitation and four hours after the injection of blood,—there was still a slight irritability in the muscles of the hand.

In this experiment I found that half a pound of defibrinated human blood was sufficient to give irritability, for several hours, to seventeen of the muscles of a hand.*

5th. An experiment on another guillotined man gave me more interesting results. The decapitation had taken place at 8 o'clock A. M. on the 12th of July, 1851. At 5½ o'clock P. M., cadaveric rigidity existed in almost all the muscles of the arms and fore-arms. I separated them from the body, and at 6½ o'clock I ascertained that cadaveric rigidity was increased, and that only a few muscles were still slightly irritable. At 8 o'clock P. M. (12 hours after the decapitation) the muscles of the two arms were completely deprived of irritability, and in full rigidity, and the muscles of the forearms contracted only locally under the influence of a mechanical irritation, and not at all when excited by a powerful magneto-electric current. Two other examinations made, one at 9½ and the other at 10 o'clock, gave the same results.

At 10¼ o'clock two or three bundles of fibres of one of the muscles of the fore-arm were the only parts where a mechanical excitation produced a slight local contraction. All the other muscles were perfectly stiff and deprived of irritability.

Twenty-five minutes after 10 o'clock there was no appearance of irritability remaining in any muscle.

I then began the preparations for the injection of blood, with the assistance of Drs. Martin-Magron, F. Bonnefin, Crouzet, and Mr. Moyse.

We drew about a pound of blood from the carotid of a strong dog. The blood was beaten and defibrinated before coagulation could take place in it, and 10 minutes after 11 o'clock the injection was begun. It was made in the brachial artery of the left arm, in the middle of its length, where the arm had been amputated. As soon as the blood had been thrown in the artery, some reddish spots appeared in different parts of the skin of the fore-arm, of the hand, and more particularly of the wrist. These spots became larger and larger, and the skin had the appearance it has in rubeola. Soon after, the whole surface of the skin was of a violet reddish hue. In a few minutes this color disappeared,

* For a full account of the circumstances of this experiment, see my paper in the *Gaz. Medic. de Paris*, t. vi.—1851, p. 421.

and was replaced by the natural hue of the skin during life. The skin became elastic and soft, as in a living man, and we saw the bulbs of its hair becoming erected and presenting the appearance called *cutis anserina*. By increasing and diminishing alternately the impulsion given to the blood, we succeeded in producing the beatings of the pulse in the radial artery. The veins were distinct and full as during life.

A short time after, the fingers, which had been extremely stiff, relaxed, and rigidity disappeared also in the other parts of the limb.

Forty-five minutes after 11 o'clock P. M., irritability had returned in all the muscles of the limb operated on. The degree of irritability, more particularly in the muscles of the arm, (triceps, biceps and others) was very considerable, and much greater than I had seen it at the time the corpse was first examined (about five o'clock P. M.) Irritability was still present in almost all the muscles of this limb at 4 o'clock A. M., (20 hours after the decapitation,) when I was obliged, from extreme fatigue, to abandon further investigation.

The blood injected was at 23° centig. (73°.4 Fahr.) when I began the operation, and the atmosphere was at 19¼° centig. (66°.66 Fahr.)

In this experiment, about one pound of defibrinated dog's blood gave irritability for more than five hours to all the muscles of a limb, from the middle of the arm to the hand.

6th. Every one knows the singular fact, that Vibriones and other Infusoria, when desiccated, will live when they are put into water. It is also perfectly known that seeds, after many centuries, may grow when put in the earth. I have found something of the same kind in higher organisms; it is that muscles, in a certain condition, after having been separated from the body for many days, may recover their irritability.

Dr. Coze, of Strasbourg, has found that chloroform injected into the main artery of a limb produces instantly the strongest rigidity, and that if blood is allowed to circulate again in the limb, life appears again in it. I have gone farther, and found that if a limb, in which an injection of chloroform has been made, is separated from the body, it is able, under the influence of an injection of blood, to recover its muscular irritability 2, 3, 4, 5

and (in one case) 10 days after the rigidity was produced. I think Mr. Edouard Robin is right in admitting that chloroform prevents the chemical changes that take place in organic bodies after death, and, if it is so, we can understand why an injection of blood made so long after the limb has been separated from the body, may reproduce irritability. One day is not more than one hour, if, during it, there is no alteration produced in the muscles.

It appears, nevertheless, that chloroform does not entirely prevent the alterations of muscles, because, in my experiments, I have found that the longer the limbs had been separated from the body, the greater was the quantity of blood necessary to reproduce irritability.

7th. I lately made an experiment, with the view of ascertaining how long a limb, separated from the body of an animal, may be kept alive by means of injected blood. I succeeded in retaining local life in one of the limbs of a rabbit more than 41 hours. The animal was a very vigorous, full grown one. I killed it by hemorrhage, and, two hours afterwards, rigidity had begun in most of the muscles of the two posterior limbs, and only a few bundles of muscular fibres had still a slight irritability. A first injection of defibrinated blood was then pushed in the femoral artery of the right posterior limb. Fifteen minutes after the beginning of the injection, local life (*i. e.* irritability) was restored in the limb receiving blood, and cadaveric rigidity had disappeared.

The manner of testing this irritability was the same as that of Glisson, Gorter, and all the experimenters of the two last centuries,—I mean by mechanical excitation. I did not use galvanism, as it exhausts muscular irritability too much, as Autenrieth, Pfaff and many other observers have shown long ago. Being aware of this fact, I have always, in my preceding experiments, made use of galvanism for a very short time only.

Three hours after the death of the rabbit, irritability still existed in the right limb (the injected one,) while the left was perfectly rigid and had not the slightest irritability. Half an hour later, rigidity had begun again in the right limb; blood was injected anew, rigidity disappeared, and local life returned. From this moment until 11 o'clock, P. M., (death had occurred at 6 o'clock, A. M. of the same day,) blood was injected many

times. Rigidity did not return, and the vital property of the muscles was maintained. Of course the left limb, during that time, remained rigid, and had not the slightest irritability.

From 11 o'clock, P. M. until 6 o'clock, A. M. the succeeding day, an abundant injection of blood was made every twenty or twenty-five minutes. The irritability was not powerful, but it existed in all the muscles of the limb. There was no rigidity at all.

The injections were then made more frequently—once in each quarter of an hour—until three o'clock, P. M., at which time I was obliged to stop them for an hour and a half.

At half past four I found the limb rigid, and only a few bundles of muscular fibres still irritable. A very abundant injection was then practised, and rigidity soon disappeared, giving way to irritability. From this time to 11 P. M., a great many injections were made, and irritability was maintained. I was then obliged to give up the experiment. At that moment irritability was strong in all the muscles of the injected limb, except some parts of their pelvic extremities that had not received a sufficient quantity of blood.

The next morning that limb was in full and energetic rigidity. The other limb had already lost its rigidity, and had an evident smell of putrefaction. The third day after the death of the animal, rigidity was strong in the injected limb, while the other was in an advanced state of putrefaction.

If we compare these two limbs, we find, 1, That the injected one had a strong irritability at the end of forty-one hours after the death of the animal; 2, That its rigidity gave way to putrefaction only at the eightieth hour; 3, That it was in complete putrefaction only at the ninety-fourth hour. The other limb was in full rigidity at the fifth hour after the death of the animal; its rigidity gave way to putrefaction at the forty-eighth hour; and it was in complete putrefaction at the seventieth hour.

From all the experiments above related, it appears that life may be reproduced or maintained in muscles and nerves by mere injections of blood. I have found, also, that life may be reproduced by the same means in the spinal cord and in the brain. I will publish these facts in another article.

It is nearly indifferent in these experiments whether we use venous or arterial blood; but it is absolutely necessary to employ red blood, *i. e.* oxygenated blood.

I have tried, sometimes, arterial blood, rendered black by the substitution of nitrogen or hydrogen for a great part of its oxygen, and I have found that such blood was unable to reproduce the vital properties of nerves and muscles.

Oxygen is necessary, either because it prevents the blood-globules from being altered, or because it acts directly on muscles, as Gustavus Liebig has found it does on their external surface, when exposed to air. I believe it is necessary for both these reasons.

I cannot say how long after the beginning of cadaveric rigidity in a muscle, oxygenated blood can reproduce local life. In the second of the two decapitated men, on whom I experimented, rigidity had existed at least five hours before the injection was begun. I believe that the stronger the animal is, the more easy it is to reproduce local life in rigid limbs, by injection of blood. In limbs of weak rabbits, I have found it impossible, two hours after the beginning of cadaveric rigidity, to reproduce local life. In a very strong dog I have reproduced muscular irritability four hours after rigidity had been fully developed.

Ten, twelve, or fourteen hours after rigidity had taken place, in human limbs, I have tried in vain to re-establish local life.

I have ascertained that pure serum of blood, or milk, or albumen of eggs, are unable to produce any apparent change in rigid limbs.

The following conclusions are to be drawn from the facts related in this article:

1st. Red blood, *i. e.* richly oxygenated blood (arterial or venous) is able to revive irritability in muscles, four or five hours after these organs have lost this property.

2d. Red blood is able to revive the vital properties of nerves and nervous centres, when these properties have not been lost for more than about an hour.

3d. Muscular irritability can be maintained for more than 41 hours, by mere injections of blood, in limbs separated from the body of a rabbit.

4th. Muscular irritability may be re-established in limbs rendered rigid by chloroform for many days, even ten days.

XXIX.—CASES OF LOSS OF SENSIBILITY ON ONE SIDE OF THE BODY, AND LOSS OF VOLUNTARY MOVEMENTS ON THE OTHER SIDE.

It has been objected to me that if the transmission of sensitive impressions, in the spinal cord, takes place, as I have tried to prove in a former part of this sketch (Art. XIX,) so that those coming from the left side of the body, are mostly conveyed to the sensorium along the right side of the spinal cord,—*et vice versa*—physicians should have some times found in man the same thing that I have discovered in animals.

Many reasons have prevented physicians from making such a discovery: In the first place, an injury or a pathological alteration, limited to a lateral half of the spinal cord, is very rare. Besides, the idea that there is no crossing of fibres in the spinal cord, has been an obstacle to a thorough examination of many pathological cases, and it has been so in a case observed by Boyer.

There are but few cases on record in which there was a loss or a diminution of sensibility on one side, and of voluntary movements on the other. I will give here a short account of some cases of that kind, which are very interesting.

The first one I will relate has been observed by Boyer:

A drummer, of the National Guard of Paris, received a wound in the back of his neck. A sword had been thrown at him, and had penetrated the superior part of the right lateral half of the neck. An incomplete paralysis of movement took place in the right side of the body, and, some time after, it was accidentally discovered that sensibility was lost in many parts of the left side of the body. After twenty days the wound was cured, and the man went out of the hospital, still paralysed.

From what we know of that case, it appears that the sword had incompletely divided the right lateral half of the spinal cord. The paralysis of motion on the right side of the body was certainly produced by the division of a part of the anterior column, and, as the instrument had penetrated the right side of the back of the neck, it must have divided the parts between the anterior column of the spinal marrow and the external surface of the right side of the neck. These parts, besides the muscles and

bones, are the lateral and posterior columns and the gray matter of the right half of the spinal cord. So that in this case nearly the same injury and also the same morbid phenomena had existed as in the animals on which I have divided a lateral half of the spinal cord.

The following case is still more interesting. It has been recorded by Dr. R. Dundas, Surgeon of the Hospital of Bahia.

A mason fell on his back from an height of 20 feet. After having recovered his consciousness, he discovered that all the left side of his body, from the shoulder to the foot, was paralyzed as to motion, without the slightest alteration of sensibility, and that the right side in which the movements were free, was completely deprived of sensibility.

Three important facts, precisely like those I have discovered in animals after the transversal section of a lateral half of the spinal cord, existed in this case:

1st. A morbid exaltation of sensibility in the side where movement was lost.

2d. A diminution of temperature in the side where the paralysis of sensibility existed.

3d. An increase in temperature in the side where the paralysis of movement existed.*

When Dr. Dundas published this curious case, the patient was living and improving; so we do not know what was the alteration existing in the spinal cord.

H. Ley, in a letter to Sir Charles Bell, relates the following case:†

Mrs. W., after a profuse hemorrhage, became paralytic. Upon one side of the body there was a loss of sensibility, without, however, any corresponding diminution of power in the muscles of volition. The breast, too, upon that side, partook of the insen-

* In a former part of this sketch (Art. xxii.) I have related facts proving that animal heat may be increased after injuries to the spinal cord. I have learned since, that Prof. D. Gilbert has observed a case of fracture of the spine, in which the temperature of the paralyzed parts was increased. Prof. Dunglison has also stated that the paralyzed side in hemiplegic patients may have an elevation of temperature.

† The nervous system of the human body. By Ch. Bell. 3d ed. London, 1844, p. 245.

sibility, although the secretion of milk was as copious as in the other. She could see the child sucking and swallowing, but she had no consciousness, from feeling, that the child was so occupied.

Upon the opposite side of the body there was defective power of motion, without, however, any diminution of sensibility. The arm was incapable of supporting the child; the hand was powerless in its grasp; and the leg was moved with difficulty, and with the ordinary rotatory movement of a paralytic patient; but the power of sensation was so far from being impaired that she constantly complained of an uncomfortable sense of heat, a painful tingling, and more than the usual degree of uneasiness from pressure, or other modes of slight mechanical violence.

She again proved pregnant. Her delivery was easy: but after about ten days she complained of numbness on both sides. Her articulation was indistinct; she became more and more insensible, and sank, completely comatose.

No positive disorganization of the brain could be detected. The ventricles, however, contained more than usual serum; and there were found thickening and increased vascularity of the membranes, with moderately firm adhesion in some parts; in others, an apparently gelatinous, transparent and colorless deposit interposed between them.

Unfortunately, no examination of the spinal cord was made.

In this case there was very likely, as in my experiments, an increase in the temperature of the side paralyzed of motion. The writer merely says that *the patient was constantly complaining of an uncomfortable sense of heat.* There was, as in my animals, an evident increase in sensibility on that side.

M. Monod* has related the case of a man who, after having felt a sudden pain in his back, became paralyzed in the motion of the right inferior limb. Sensibility was entire on this side, but on the left side, where the movements were entire, sensibility was entirely lost from the breast to the foot. There was at first no fever. The patient died 34 days after the beginning of this affection.

The brain and its membranes were normal. A hemorrhage

* Bulletin de la Société Anatomique, No. xviii. p. 349.

had taken place, and blood was found in the right side of the central gray matter, in the neighborhood of the anterior column in the dorsal and lumbar regions.

This case is assuredly a very remarkable one, and in accordance with my experiments.

The conclusion to be drawn from these four cases is, that in man as well as in animals, there appears to be a crossing of the sensitive nerve-fibres in the spinal cord.

XXX.—ON THE DIFFERENT DEGREES OF EXCITABILITY OF THE DIFFERENT PARTS OF THE SENSITIVE NERVE-FIBRES.

It is a well-known fact, that an excitation of the skin or of a mucous membrane, produces a greater pain or a greater reflex action than that of the nerve trunk, from which these parts receive their nerve-fibres. For instance, a slight excitation of the laryngeal mucous membrane produces coughing, while an excitation of the vagus nerve very rarely produces the same effect. Therefore, there is a notable difference between the peripheric extremity of a nerve-tube and its part contained in a nerve-trunk.

The existence of a peculiar organ in the skin (the *corpuscles of touch* of Wagner) has not much (if it has anything) to do with the different degrees of excitability of nerve-tubes in the skin and in the trunks of nerves. The corpuscles of touch do not exist in the mucous membranes, and if they exist in the skin of frogs, turtles, etc., it is in a very small number; and, nevertheless, the degree of excitability of nerve-fibres in these parts is much superior to that of the fibres of the nerve-trunks.

Some very striking differences exist in the degree of excitability of centripetal nerve-fibres in the five following different parts of their length.

1st. The part contained in the skin.

2d. The part of a nerve extending from the skin to the spinal cord.

3d. The posterior roots of the spinal nerves.

4th. The part of the posterior roots attached to the spinal cord.

5th. The part of the cutaneous nerve-fibres contained in the gray matter of the spinal cord.

The fibres existing in the gray matter of the spinal cord appear to be inexcitable, at least by our ordinary means of excitation. Of the four other parts, the less excitable is the nerve between the ganglion and the skin. The excitability of the posterior roots is less than that of the skin and that of their part attached to the spinal cord. Of these two last parts the skin is less excitable than the other.

I measured the excitability by the degree of pain or of reflex action. The differences are much more easily found for the reflex action than for the pain.

Is it because they have been connected with the cells of the central gray matter of the spinal cord, that the centripetal fibres, contained in that gray matter, are not excitable? If it is so, there is a difference between these cells and those of the ganglions on the posterior roots, because the connection of these fibres with the cells of these ganglions does not prevent their being excitable.*

From the facts above related I conclude that the same nerve-fibre, in different parts of its length, may have very different degrees of excitability.

(To be continued.)

Iodine as a preventive of Mammary Abscess. By H. C. Stewart, M. D., of Salisbury, Somerset Co., Pa.

This communication, I presume, will fall under the notice of no physician unacquainted with what is usually termed mammary abscess, both as regards the condition of the breast and the best known means of obviating that distressing condition, to which the "lying-in woman" is so often subjected.

Perhaps no organ of the body is capable of producing a

* Recently, Dr. Cl. Bernard has communicated to the *Société de Biologie*, of Paris, a fact which would be very important if it were exact. He says that some of the fibres of the posterior roots of the spinal nerve, in frogs, do not pass through the ganglion,—that they are the sensitive fibres, and that the ganglionic fibres are merely for reflex action. I have made, alone or with my friend Dr. Henry Lolliot, the minutest examination of the spinal ganglions, and I am satisfied that all the fibres of the posterior roots pass in the ganglion, and that Dr. Bernard has been mistaken.

greater amount of suffering to the patient, and vexation to the physician, than the female breast. Situated upon a prominent part of the body—delicately constructed—influencing and being influenced at times, by other organs, it is adapted to the performance of an important function, the disturbance of which must necessarily produce a disagreeable and dangerous result, often requiring the best efforts of the physician to counteract.

Seeing, then, that these things are so, we have been led to inquire, Is there no remedy? or must our patients, after having undergone the agony of parturition, still suffer on, simply because their breasts have not been properly and sufficiently relieved of milk as fast as secreted?

If mammary abscess cannot be *prevented*, it is not because *remedies* have not been *proposed* for it; for amongst all the "ills that flesh is heir to," there is none, perhaps, for which such a multitudinous variety of *cures* has been tried. This is probably the best evidence of the difficulty of preventing such an occurrence.

The first indication that suggests itself to the mind of the physician, is to remove the tension by withdrawing the milk. But this cannot always be done; for in how many cases do we find a complete obstruction of the ducts; others, again, where there are no nipples, consequently no outlet for the milk. Have we no remedy here, or must we let the gland inflame, and then bleed and apply leeches and "poultices to favor suppuration," and when the abscess forms, open it with a lancet, and run the risk of forming a milk fistula, then apply adhesive strips, and if all this fail—*let it alone?*

In the early part of my practice, I was called to attend a lady, the mother of five children, none of whom she had ever suckled, owing to an inversion of the nipples, and consequent obstruction of the ducts. So thorough was this obstruction, that the best efforts of the physicians, on former occasions, had totally failed to relieve the breasts of a particle of milk; consequently the woman had suffered on every occasion from mammary abscess.

In giving me a history of the treatment at different times, she said that at one time she came near losing both breasts; when

the physician, (dead at the time of this conversation,) as a last remedy, applied something which, from the description given me, I believed to be iodine. Knowing the efficacy of that article in all glandular affections, I resolved to try it as soon as the breasts showed any signs of inflammation. On the third day, finding them large, heavy and intensely painful, I made an application to the breasts of iodine ointment spread upon linen, which gave almost immediate relief. After a few applications, I found the breasts "perfectly flaccid, completely cool, and admitting of the freest palpation and handling, without the woman making any complaint." From the favorable result in the above case, I was induced to try it in two similar cases, with the same success, and so far as I know it has never failed in the hands of any of my medical friends to whom I have recommended it; but not a few there are who can bear testimony to its virtues.

With these few suggestions, I respectfully submit it to the profession, hoping that it may not disappoint their expectations.

Tetanic Symptoms from the use of Iodide of Potassium. By D. P. PHILLIPS, M. D., Passed Assistant Surgeon, U. S. N. (Communicated by PROF. DUNGLISON.)

A case of some singularity having occurred under my own observation, and thinking that it might not be devoid of interest to you, I have concluded briefly to give its history.

Whilst Acting Surgeon of the U. S. Ship Massachusetts, a fireman, named J. White, was admitted upon my sick list with rheumatism. I ordered the administration of iodide of potassium, grs. viii. ter in die, to be taken before meals in a spoonful of water. Soon after commencing with the remedy (probably the second day) he complained of some uneasiness and stiffness in the jaws; but supposing it to be some trivial affair, I paid but little attention to it. On the next day the difficulty had increased, and I directed frictions with some stimulating liniment; but when I saw him the day after, the jaws were immoveable. Upon careful inquiry, I ascertained that ever since he had been using the iodide he had experienced a burning and uneasy sensation in

the œsophagus and stomach. Upon learning this I discontinued the medicine, and ordered counter-irritation over the stomach. In a few days the tetanic symptoms entirely disappeared, and the iodide of potassium was renewed, but diluted in a tumbler half full of water, and given *after* each meal. The patient entirely recovered from rheumatism, and had no return of the trismus. I attributed the unusual symptoms entirely to the use of iodide of potassium in too concentrated a form.

Mortality of Philadelphia for January, February and March, 1853, arranged from the Record kept at the Health Office. By Wilson Jewell, M. D.

The total number of deaths from all causes for the first quarter of the present year, beginning Jan. 1st and ending April 2d, including a period of 92 days, or 13 weeks and one day, amounts to 2478, averaging 27 deaths per day.

By deducting the "Still Born," the deaths from "External Causes, Old Age, Debility and Unknown," we have left 2033 deaths from known diseases.

The excess of deaths in the sexes is on the side of the males, amounting to 138.

The male still-born children almost double in number those of the female sex.

Eight hundred and seventy-five, or 36 per cent. of the deaths from all causes, exclusive of Still-Born, were in children under five years of age. Of these, the diseases of the organs of Respiration, Convulsions and Croup, make up two fifths of the whole.

Nearly 20 per cent. of all the deaths, took place in individuals under 19 years of age.

The aggregate of deaths fall short of those for the same months in 1852 by 12½ per cent. This difference is about equivalent to the decrease in the mortality from Small Pox, as presented in the two tables. The 1st quarter of 1852 showed 258 deaths from Small Pox; the present year, for the like period, gives only 29.

Class I. Among the deaths classified as Endemic or Zymotic,

there is a decrease of 20 per cent. from those for the same months and in the same class in 1852, while the deaths from Croup, Scarlet, Typhus and Typhoid Fevers have increased over 40 per cent. The discrepancy, however, may be reconciled by the great falling off in the deaths from Small Pox. Scarlet Fever provides 223 deaths in this class, in proportion, nearly, as one to two of all others under the same head. The disease was most fatal in February, and the period of life when the greatest mortality occurred was between 2 and 5 years.

Class II. Of the Sporadics, or diseases of Uncertain Seat, there were 315 deaths. Ninety-seven, or nearly one-third, are charged to that exceedingly indefinite cause of death, Debility; and of these 42, or nearly one-half, were within the first year of life.

Class III. Under the head of Nervous Diseases, we find Convulsions occupying a very prominent place in the scale. Out of 404 deaths, they are made to furnish 133! sixty-nine of these were under one year of age.

Class IV. The deaths from diseases of the Organs of Respiration amount to 596, exceeding those of any other class, and are as one to three and a half of the whole number. Compared with those of the same class and period for last year, there is a falling off of 20 per cent.

Consumption of the Lungs holds a very conspicuous position in this table, furnishing 344 deaths, only 14 less than for the same quarter of 1852, notwithstanding the extreme mildness of the season. This fact appears to sustain the opinion, that neither temperature nor seasons afford any great exemption from its uniform fatality. The deaths recorded from Consumption of the Lungs, occupy thirteen distinct periods of life, but observe no equality. The particular age during which it seems to have been more frequently fatal was between 20 and 30, when one-third of the whole number recorded occurred. This peculiarity corresponds with other statistics. Among females the deaths were 15 per cent. more than in males.

Pneumonia stands next highest, namely, 113. A large proportion of these—more than one-half—took place within the fifth year of life. Children would seem to be its victims in a

peculiar degree. Compared with those for '52 in the same quarter there is a falling off of 42 per cent.

Class VIII. The diseases of the Organs of Generation supply only 34 deaths. Of this number 32 were females, and 16, or one-half, are ascribed to Child Bed and Puerperal Fever. If we base the calculation upon 2800 births quarterly, it will give us one death in every 175 deliveries. During the same period in 1852 there were 27 deaths recorded from Puerperal Fever and one from Child Bed.

The table marked No. 3 gives a summary of the number of deaths during the quarter, at fifteen distinct periods of life. From this it appears that 470, or 18 per cent., took place within the first year of life, and 1036, or 42 per cent., were under five years. These calculations include the Still-Born. Beyond 70 years there were 141 deaths, or 6 per cent. of the whole number recorded. There were 12 deaths over 90, and one over 100 years of age.

TABLE No. I.

Deaths for the First Quarter of 1853, *classified.*

	January.	February.	March.	MALE. J.	MALE. F.	MALE. M.	FEMALE. J.	FEMALE. F.	FEMALE. M.	Total.
1. *Endemic and Contagious Diseases.* Zymotic or Epidemic	164	193	183	107	103	90	57	90	93	540
2. *Uncertain or general seat.* Sporadic diseases	89	101	125	41	56	68	48	45	57	315
3. Nervous System	123	134	147	59	82	77	64	52	70	404
4. Organs of Respiration	195	153	248	100	75	114	95	78	134	596
5. " Circulation	17	14	25	7	12	12	10	2	13	56
6. Digestive Organs	45	48	53	31	22	22	14	26	31	146
7. Urinary Organs	2	5	7	1	3	6	1	2	1	14
8. Organs of Generation	8	13	13			2	8	13	11	34
9. " Locomotion	4	6	9	1	2	5	3	4	4	19
10. Integumentary System		1	5			3		1	2	6
11. Old Age	12	15	12	5	5	5	7	10	7	39
12. External Causes	29	30	38	18	14	22	11	6	16	87
Still Born	52	58	51	34	36	32	18	22	19	161
Unknown	18	15	28	9	9	18	9	6	10	61
	758	776	944	413	419	476	345	357	468	2478

TABLE No. II.

1. *Endemic and Contagious Diseases.—Zymotic or Epidemic.*

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Cholera Infantum	2	3	5															5
Croup	59	50	15	27	52	15												109
Diarrhœa	6	3	3		1	1				2				2				9
Dysentery	14	6	4	3	2	1		1	1	1	2	2	2	1				20
Erysipelas	13	17	12	4	1			2	2	3		3	2		1			30
Fever	1				1													1
" Bilious	2	4		1		1		2	1						1			6
" Congestive	2					2												2
" Remittent	1	1				1								1				2
" Scarlet	124	99	20	42	112	40	5	1	2				1					223
" Typhus	35	15				1		5	15	12	10	4	2	1				50
" Typhoid	24	19		2	1	3	1	2	6	9	9	6	3	1				43
Hooping Cough	1	2	2	1														3
Measles	4	2		4	2													6
Small Pox	11	18	11	5	5	3	1	2		2								29
Influenza	1	1								1			1					2
	300	240	72	89	177	68	7	15	27	30	21	15	11	6	2			540

2. *Uncertain or General Seat.—Sporadic Diseases.*

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Abscess	2					1	1											2
" Neck	2		1						1									2
" Throat		1			1													1
Angina	2	1			2					1								3
Cancer	5	3								2	1	1	4					8
" Breast		2											1	1				2
Cyanosis	1	1	1		1													2
Debility	42	55	42	2		1		3	2	6	7	4	14	12	1	3		97
Disease of Throat	2		1		1													2
Dropsy	27	24	1	1	10	6	1	2	5	2	2	5	11	4	1			51
Enlarg't of Parotid Glands	1									1								1
Hectic Fever	3	1		1					1	1		1						4
Hemorrhage	3	2	1				1		1	2								5
" Umbilicus	1	1	2															2
nanition	10	4	10	1						1		1	1					14
nflammation	1	3	1	1					1							1		4
" Throat	1	2	1		1					1								3
" Parotid Glands		3	2						1									3
Malformation	8	1	9															9
Marasmus	34	26	39	9	5		1	1		1		1	2	1				60
Mortification	1													1				1
" of Neck	1											1						1
Scrofula	8	11	4	4	4	1	3	1	1		1							19
Scirrhus	2								1						1			2
Tabes Mesenterica	4	5	4	1	2		1		1									9
Tumors		1								1								1
" of Abdomen		1											1					1
Ulceration		1							1									1
" of Throat	4	1			2	1			1			1						5
	165	150	119	20	29	10	8	7	17	19	11	15	34	19	3	4		315

3. Of the Nervous System.

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Apoplexy	12	18	2		1				3	3	3	7	4	3	4			30
Concussion of Brain		1							1									1
Congestion "	16	20	9	5	8	3			2	3	5			1				36
Compression "	1	1								1			1					2
Coma	1										1							1
Convulsions	76	57	69	23	24	5		4	3	3		1	1					133
" Puerperal		1							1									1
Cramp	1	1	1		1													2
Disease of Brain	9	12	9	3	3	2	1		1	1				1				21
Dropsy "	32	19	24	16	9	1		1										51
Effusion "	18	18	5	8	8	3		2	2	3	1	1	2	1				36
Epilepsy		2			1				1									2
Inflammation of Brain	28	18	11	9	12	6	1		4	1	2							46
Mania	1									1								1
" a potu	9	5							3	5	3	2		1				14
Palsy	9	8	1			1			1	3	3	1	1	1	5			17
Softening of Brain	3	3	1						3			2						6
Tetanus	2	2	2			1	1											4
	218	186	134	64	67	22	3	7	25	24	18	14	9	8	9			404

4. Organs of Respiration.

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Abscess of Lungs	2	1	1									1		1				3
" Thorax	1									1								1
Asthma	2	2										1	1	2				4
Congestion of Lungs	6	11	6	1	2	1	1				1	1	1	2	1			17
Consumption "	158	186	3	6	6	8	4	27	116	76	49	29	12	6	2			344
Disease of Lungs	3	2	2					1		1			1					5
" Chest	1		1															1
Dropsy of Chest	9	3			2	1			2	2		3	2					12
Effusion "		3				1			1					1				3
Hemorrhage of Lungs	3	2							3			2						5
Inflammation of Bronchiæ	28	39	27	9	13	5	1	1	2	2		1	3	1	2			67
" Chest	3	1	2		2													4
" Larynx	4	5	1	1	3	1			1		1		1					9
" Lungs	63	50	33	17	14	10		4	5	7	4	5	4	8	1	1		113
" Pleura	3								1			1	1					3
" Tonsils	1	1		1	1													2
Tuberculosis	2	1			1					1				1				3
	289	307	76	35	44	27	6	33	131	90	55	44	26	22	6	1		596

5. Organs of Circulation.

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Anæmia	3	2					1		1		1			2				5
Aneurism Carotid	1		1															1
Congestion of Heart		1													1			1
Disease of Heart	17	13	3		2	1		1	2	1	7	4	8	1				30
Dropsy "	1	3		1	1		1		1									4
Enlargement of Heart	3	2				1	2				1			1				5
Inflammation "	3	3		1			1		1	1		2						6
" Vein		1				1												1
Malformation of Heart	1			1														1
Ossification "	1												1					1
Syncope	1											1						1
	31	25	4	3	3	3	5	1	5	2	9	7	9	4	1			56

6. Digestive Organs.

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Abscess Abdominal		1					1											1
Aphthæ		1	1															1
Cancer of Bowels	1									1								1
" of Stomach	1	1									1			1				2
Cirrhosis of Liver	2									1	1							2
Colic	1		1															1
Congestion of Liver	1		1															1
Consumption of Bowels	2	1	1							1		1						3
Cramp of Stomach	1									1								1
Disease of Bowels	1	2	1		1						1							3
" Liver	4	2	1		1					1	2		1					6
" Stomach		1									1							1
Dyspepsia	1													1				1
Dropsy Abdominal	1	3								2	1	1						4
Gangrene of Bowels		1								1								1
Hemorrhage of Bowels	1	2								1	1		1					3
" Stomach		2	1							1								2
Hernia		1											1					1
Ileus	1									1								1
Inflammation of Bowels	3	4	2	1	3				1									7
" Stom'h & Bow'ls	25	27	9	4	5	5	2	2	8	7	2	3	5					52
" Liver	2	1								1		2						3
" Peritoneum	9	12	2			1			6	7	1	2		1	1			21
Intussusception	1	1	2															2
Jaundice	5	1	1						3			1		1				6
Obstruction of Bowels	1		1															1
Perforation of Bowels	2					1						1						2
Scirrhus "	1											1						1
" of Stomach	2										1	1						2
Strangulation of Bowels	1	1												2				2
Stricture "	1	2	1			1						1						3
Teething	3	2	1	3		1												5
Tumour of Abdomen		1										1						1
Ulceration of Stomach		1								1								1
Tympanites	1							1										1
	75	71	26	8	10	9	3	3	18	27	12	15	8	6	1			143

7. *The Urinary Organs.*

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Albuminuria		1						1										1
Diabetes	2	1						1			2							3
Disease of Bladder	1													1				1
" Kidneys	3	1				1	1			1			1					4
Inflam. of Bladder	1	1									1		1					2
" of Kidneys	2		1									1						2
Retention of Urine	1										1							1
	10	4	1			1	1	2		1	4	1	2	1				14

8. *Organs of Generation.*

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Child Bed		4							2	2								4
Chlorosis		1							1									1
Disease of Uterus		1													1			1
Enlargemt. Prostate Gland	2											1	1					2
Hemorrhage from Uterus		4							1	1	2							4
Inflammation "		4						1	1	2								4
Ovarian Dropsy		1									1							1
Phlegmasia Dolens		1								1								1
Puerperal Fever		12							5	6	1							12
" Mania		2						1		1								2
Rupture of Uterus		1								1								1
Tumour "		1									1							1
	2	32						2	10	14	5	1	1		1			34

9. *Organs of Locomotion.*

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Abscess of Spine		1				1												1
Caries	1								1									1
Caries of Spine		1								1								1
Disease "	2	2		1	1				1		1							4
" of Hip		1						1										1
Inflammation of Spine		1													1			1
Necrosis		1										1						1
Rheumatism	5	3				1	1			2	1	2		1				8
Spinal Irritation		1							1									1
	8	11		1	1	2	1	1	3	3	2	3		1	1			19

10. *The Integumentary System.*

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Fistula		1								1								1
Ichthyosis	1			1														1
Purpura Hemorrhagica	2	2	1					1						1	1			4
	3	3	1	1				1		1				1	1			6

11. *Old Age.*

Old Age	15	24										1	1	13	16	7	1	39

12. *From External Causes.*

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Asphyxia	10	6	15	1														16
Burns	4	5	1	3	4				1									9
Casualties	15	14	6	1		3	1	1	4	8			4	1				29
Drowned	7						1			4	1		1					7
Fracture of Leg	3								1	1	1							3
" Skull	1	1				1						1						2
Intemperance	5	2							3	1	1	1	1					7
Poison	1	3							1	1	2							4
Suicide	2	1							1	1		1						3
Suffocation	6	1	2							5								7
	54	33	24	5	4	4	2	1	11	21	5	3	6	1				87
Still Born	102	59	161															161
Unknown	36	25	13	2	3	1	1	1	7	8	7	8	5	4	1			61

TABLE NO. 3.

Deaths for the First quarter of 1853, *at fifteen distinct periods of life.*

Under 1 year,	470
1 to 2	228
2 to 5	338
5 to 10	147
10 to 15	37
15 to 20	74
20 to 30	254
30 to 40	240
40 to 50	149
50 to 60	127
60 to 70	112
70 to 80	86
80 to 90	42
90 to 100	13
100 to 110	1
	2317
Still Born	161
Total,	2478

Included in the above Tables, were 201 from the Blockley Almshouse, 172 people of color, and 26 from the country; as follows:

	Jan.	Feb.	March,	Total.
Almshouse, . .	73	55	73	201
Blacks, . . .	43	56	73	172
Country, . .	8	7	11	26
	124	181	157	399

BIBLIOGRAPHICAL NOTICES.

Letters on Syphilis. By PH. RICORD, Chirurgien de l'Hôpital du Midi, &c., &c. With an Introduction by Amédée Latour Translated by W. P. LATTIMORE, M. D. Philadelphia: A. Hart, 1852. pp. 270.

These LETTERS appeared originally in the *Union Médicale* of Paris, during the years 1850, 1851. They have found their way, through various channels, to the English reader, and have, since the completion of the series in the Paris Journal, been collected and translated by Dr. Lattimore. They present a resumé of M. Ricord's peculiar views on the subject of syphilis, and are more particularly occupied with the defence and illustration of those "new doctrines" which, he complains, have failed, in the twenty years of his teachings and writings, to penetrate the minds of all his contemporaries. The Letters, however, despite the popularity with which they have been received, will, we think, fail to silence the dissenters from some of M. Ricord's dogmata. He has, indeed, repeated his old views in a very lively and attractive form; but we doubt whether the style and tone of the Letters will add anything to his reputation or give new force to his opinions.

M. Ricord's researches have certainly identified his name with the subject of syphilis. His experiments upon inoculation, his admirable scheme of syphilitic therapeutics, and his application of the speculum to the diagnosis of venereal ulcers, are among the most valuable contributions to modern medicine. But M. Ricord is a man of one idea—and that idea is *inoculation.* He

has found it to be a *positive* test of the specific character of the chancrous virus, and he attempts to pervert it into a *negative* test of the non-specific nature of gonorrhœa or, as he denominates it, blennorrhagia. The latter is scarcely less a point with him than the former; and, in fact, more than one-third of the Letters are devoted to it. It is not our purpose to follow M. Ricord's argument on this question. Its weakness strikes us as apparent in the postulate, upon which his facts are brought to bear. "If blenorrhagia," he assumes, "recognizes a specific cause, the muco-pus which it secretes will, undoubtedly, when inoculated, produce phenomena similar to those produced by the inoculation of chancrous pus." (p. 44.) That is, it is enough for M. Ricord to establish that inoculation with the matter of blennorrhagia is not followed by the phenomena which result from inoculation with chancrous pus, to warrant him in inferring the non-specific character of the former secretion!

It has not been our good fortune to read the Letters in the original. The translation is, we dare say, faithful and accurate, but it is evidently the work of an unpractised pen.

Proceedings of the Medical Association of the State of Alabama, at its Sixth Annual Meeting, held December, 1852. pp. 168.

We have already had occasion to notice the spirit and zeal evinced in the annual Proceedings of the Alabama State Medical Association. The volume just issued maintains the high rank which the profession of Alabama had previously assumed among our State organizations.

MEDICAL NEWS.

Delegates to the State Medical Society.—At a meeting of the Philadelphia County Medical Society, held April 20th, 1853, the following were elected delegates to the Pennsylvania State Medical Society: Wm. Ashmead, John B. Biddle, Henry Bond, Thomas F. Betton, J. R. Bryan, Chas. F. Bibighaus, B. H. Coates, Jos. Carson, D. Francis Condie, Wm. Darrach, G. Emerson, Jas. V. Emlin, Geo. Fox, P. B. Goddard, David Gilbert, Ed. Hallowell, S. L. Hollingsworth,

Isaac Hays, N. L. Hatfield, Samuel Jackson, W. Jewell, E. Janvier, A. L. Kennedy, W. H. Klapp, W. L. Knight, John P. Lamb, R. J. Levis, Wm. Mayburry, John K. Mitchell, Geo. W. Norris, A. Naudain, Hen. S. Patterson, L. Rodman, N. C. Reid, M. B. Smith, A. E. Stocker, L. Turnbull, F. West, J. Warrington, Thomas S. Yardley.

THE PHILADELPHIA DELEGATION TO THE NATIONAL MEDICAL ASSOCIATION.—The various bodies entitled to representation in the American Medical Association, have, so far as we have learned, selected the following delegates:

College of Physicians.—I. Hays, G. Fox, H. Bond, W. S. W. Ruschenberger, G. Emerson, J. R. Paul, C. Evans, W. Ashmead, J. Bell, E. Hallowell, A. Stillé, J. Carson, R. La Roche, E. Hartshorne, R. Bridges.

Philadelphia County Medical Society.—W. Ashmead, T. F. Betton, C. F. Bibighaus, D. F. Condie, B. H. Coates, J. Carson, G. Fox, S. Jackson, W. Jewell, J. F. Lamb, E. F. Leake, C. D. Meigs, W. Mayburry, G. W. Norris, H. S. Patterson, W. B. Page, L. Rodman, J. M. Thatcher, F. West, T. H. Yardley.

Northern Medical Association.—L. Curtis, B. S. Janney, N. L. Hatfield, J. F. Lamb, R. J. Levis, I. Remington.

University of Pennsylvania.—S. Jackson, R. E. Rogers.

Jefferson Medical College.—J. K. Mitchell, J. Pancoast.

Pennsylvania Medical College.—J. M. Allen, J. J. Reese.

Medical Institute of Philadelphia.—J. B. Biddle.

Philadelphia Medical Association.—Wm. V. Keating.

Pennsylvania Hospital.—

St. Joseph's Hospital.—H. H. Smith.

Hospital of P. E. Church.—F. G. Smith.

DR. MARSHALL HALL.—We have great pleasure in presenting to our readers, in the present number, the Lecture delivered by Dr. Marshall Hall before the Smithsonian Institute. Dr. Hall's visit to the United States will, we trust, afford frequent opportunities to the profession of becoming personally acquainted with one whose name and works have been so long and so favorably known to them.

UNIVERSITY OF VIRGINIA.—Dr. Wm. B. Rogers has resigned the chair of Natural Philosophy, and Dr. J. Lawrence Smith that of Materia Medica and Chemistry in this Institution.

The Queen has conferred the honor of a baronetcy upon Dr. Henry Holland, one of the physicians-extraordinary to her Majesty.

TRIBUTE TO DR. BROWN-SÉQUARD.—At a meeting of the members of the class attending Dr. Brown-Séquard's second course of lectures in Philadelphia, held at the Pennsylvania College, Ninth street, below Locust, on Tuesday, April 26th, 1853, the following preamble and resolutions were presented by Dr. Edward Hartshorne, and unanimously adopted:

Whereas, The second of the two courses of lectures delivered by Dr. Brown-Séquard in this city, has just closed; and,

Whereas, The members of the second class, most of whom were also members of the first, are unwilling to part with him, without expressing in some way their appreciation of his most interesting and instructive demonstrations, and of his many new views in biology, and the application of these to the practice of medicine and surgery, therefore—

Resolved, That we are under the greatest obligation to the learned and able lecturer, for his admirable series of experiments, so happily explained and illustrated, not only on account of the valuable instruction he has thus conveyed to us, but on account of the powerful impulse to the more efficient practical study of biological science, which his precept and example have thus afforded us.

Resolved, That we regard his visit to this country, and the delivery of the various brilliant and successful courses on his favorite subject, in the cities of Boston, New York and Philadelphia, as likely to mark a new era in the progress of biological research in the United States.

Resolved, That we take leave of Dr. Brown-Séquard, as our teacher, with great regret, not only on account of the many original views which he has presented to us, as the result of his own investigations, and the many useful applications of these views to the improvement of the practice of medicine and surgery, but on account of his attractive qualities as an amiable and honorable man. And finally,

Resolved, That in view of his contemplated return to his old home, and the field of his early triumphs, we cannot do better than to wish him the same distinguished success that attended him there, increased opportunity of further discovery, and a more lasting prosperity in all the relations of life.

On motion, the Chairman and Secretary were appointed a committee to convey a copy of the above Resolutions to Dr. Brown-Séquard, on behalf of the class, and to procure their publication in the Medical News and the Medical Examiner.

(Signed) FRANCIS G. SMITH, M.D., *Chairman.*

J. CHESTON MORRIS, *Secretary.*

GLASGOW MEDICAL JOURNAL.—The first number of a new and very able Quarterly Journal appeared on the 1st of April last, at Glasgow, in Scotland.

CHOLERA.—A recent letter states that there were 201 cases of cholera in St. Petersburgh, and that at the date of the letter there were thirty-two new cases, ten cures, and twelve deaths. This disease is disappearing at Breslau through (as the medical officers state) the low temperature of the atmosphere.—*Lond. Lancet, April 9th.*

APPOINTMENT.—M. Dubois has been appointed accoucheur to the Empress of the French.

TYPHUS FEVER IN PARIS.—This frightful disease, according to the latest intelligence, is raging in Paris and its vicinity, and more especially in the military hospitals. Messrs. Begin and Levy have been ordered, as the medical inspectors, to make an official report of its origin and progress.

ACADEMIE DE MEDECINE.—The Académie de Médecine yesterday elected as foreign members MM. Buffalini, of Florence, Mott, of New York, Warren, of Boston, Riberi, of Turin, Vieminckz, of Brussels, Retzius, of Stockholm, and Simpson, of Edinburgh.—*Galignani's Messenger, 12th March*, 1853.

DISEASES AMONG THE BEDOUIN ARABS.—Diseases are rare among them; and the epidemics, which rage in the cities, seldom reach their tents. The cholera, which has of late visited Mosul and Bagdad with fearful severity, has not yet struck the Bedouins; and they have frequently escaped the plague, when the settlements on the borders of the Desert have been nearly destroyed by it. The small-pox, however, occasionally makes great ravages among them, vaccination being still unknown to the Shammar; and intermittent fever prevails in the autumn, particularly when the tribes encamp near the marshes in Southern Mesopotamia. Rheumatism is not uncommon, and is treated, like most local complaints, with the actual cautery, a red-hot iron being applied to the part affected. Another cure for rheumatism consists in killing a sheep, and placing the patient in the hot reeking skin. Ophthalmia is common in the Desert, as well as in other parts of the East, and may be attributed as much to dirt and neglect as to any other cause.

The Bedouins are acquainted with but few medicines. The Desert yields some valuable simples, which are, however, rarely used. Dr.

Sandwith, hearing from Suttum that the Arabs had no opiates, asked what they did with one who could not sleep. "Do!" answered the Sheikh, "why, we make use of him, and set him to watch the camels." If a Bedouin be ill, or have received a wound, he sometimes comes to the nearest town, to consult the barbers, who are not unskilful surgeons. Hadjir, one of the great chiefs of the Shammar, having been struck with a musket ball, which lodged beneath the shoulder blade, visited the Pasha of Mosul to obtain the aid of the European surgeons attached to the Turkish troops. They declared an operation to be impossible, and refused to undertake it. The Sheikh applied to a barber who, in his shop in the open bazaar, cut quietly down to the ball, and taking it out, brought it to the Pasha in a plate, to claim a reward for his skill. It is true that the European surgeons in the service of the Porte are not very eminent in their profession. The Bedouins set broken limbs by means of rude splints.

The women suffer little in labor, which often takes place during a march, or when they are far from their encampment, watering the flocks or collecting fuel. They allow the children to remain at the breast until they are nearly two or even three years old, and, consequently, have rarely many offspring.—*Dublin Med. Press*, from *Discoveries in Nineveh by A. H. Layard, M. P., in Association Medical Journal.*

Death of M. Orfila—M. Orfila was but a short time ago snatched by the hand of death from the midst of friends and admirers, at the age of sixty-six years. This eminent man was so highly esteemed among his countrymen, and enjoyed such a world-wide reputation, that we gladly devote some of our space to sketch the brilliant career of so distinguished a member of our profession.

The deceased was born at Mahon, in the island of Minorca, on the 24th of April, 1787, and could, as well expressed by M. de Salvandy, from the rocks of his country contemplate both empires, and one day choose between the two lands. He possessed within himself the genius peculiar to each soil—the fertile, bold and searching activity of the one, the firmness, patience, and enduring perseverance of the other. Orfila's mind was first engaged upon the study of mathematics, as he was intended for a maritime life, at a time when the French and Spanish fleets were co-operating in the East. He actually served a short time, but soon relinquished the sea, and from the pursuit of mathematics turned to the cultivation of the natural sciences. For this purpose he repaired to the University of Valencia in the year 1804.

Physics and chemistry were at that period at a very low ebb in Spain; and Orfila, not satisfied with hearing his professors stating that air and water were two elements, seized upon the works of Lavoisier, Berthollet,

Fourcroy and others, and rose to the level of the discoveries of the day. But the University of Valencia was just then being threatened with abolition, on the plea of insufficient teaching; the professors provoked an inquiry, and put forward their pupils. Orfila greatly distinguished himself in the examinations, and so complete was his success, that the junta of Barcelona sent him to Paris at their own cost, to study chemistry, and the application of that science to the arts.

He arrived in Paris in 1807, and soon took a great liking to a country which, for the subsequent forty-six years, became his adopted land. The war which soon broke out between France and Spain deprived him of his allowance from Barcelona, but he was temporarily supported by a member of his family. It should here be mentioned that many years after this period, Orfila offered the junta his services, from gratitude at the patronage they had formerly granted him; but that body was in too disorganized a state to accept the honest man's disinterested proposals. Nor would his return to Spain have been a small sacrifice; for Vauquelin had welcomed him in his laboratory, and Fourcroy had entrusted to him the task of giving a few lectures on Organic Chemistry.

Orfila now obtained the degree of Doctor of Medicine, and began to lecture privately on Chemistry, Forensic Medicine, and even Anatomy, (a kind of authorized grinding,) and in this first and small laboratory he laid the foundation of the new science of toxicology. We say *new*, and advisedly; for the books published before Orfila's time mention none of those delicate tests introduced by the great chemist; it is true that even then certain poisons could be detected when dissolved in, or mixed with, water; but when these poisons were added to wine, milk, bile, &c., they were beyond the skill of the chemists of the day. Orfila's researches rendered investigations of this kind, and many others of equal importance, perfectly easy.

Orfila was soon appointed corresponding member of the Institute, (a generic name given to the four academies taken collectively,) and in 1819 he was appointed Professor of Forensic Medicine at the Faculty of Medicine, especially by the influence of the celebrated Hallé, who, though very ill, had himself carried to the medical school to vote for M. Orfila.

It was at first supposed that lectures on Forensic Medicine at the Faculty would attract but few hearers; but Orfila's happy mode of teaching, and of captivating the attention of the pupils, rendered the subject peculiarly attractive. His language was lucid, without being too much studied; and he treated the most difficult questions with so much method and precision, that the mind readily followed him. He was especially fond of conveying knowledge by actual experiment, and gave his explanation with a clear and penetrating tone of voice, in well chosen periods, and without too much fire or any hesitation. He loved to teach and guide the pupils, and thus drew around himself numerous and attentive hearers during the four years he lectured on forensic medicine, and the twenty-nine which he devoted to medical chemistry. This success is the more flattering, as pupils are not *bound* to attend the lec-

tures of any professor, and that the latter have a fixed salary, independent of the number of students who may attend them.

The fame of Orfila was now daily spreading, and his works and teaching on toxicology, forensic medicine, and chemistry testify to his immense labors; but he seemed to direct his whole energy to the detection of poisons. He looked upon the science of toxicology as composed of two principal divisions—one comprising the symptoms of poisoning, the consequent lesion of texture, and the medical treatment; the other, more exclusively chemical, embracing the detection of the poison either with a view of the discovery of an antidote, or for guiding the verdict of a jury. Both these branches were so highly cultivated by Orfila, that he became the oracle in the courts of law, and the dread of those who contemplated the treacherous administration of deadly substances.

In 1820, the Academy of Medicine, as now constituted, was founded by Louis XVIII., and the original members were seventy in number. Orfila was one of them, and, strange to say, the youngest of all. He distinguished himself for the next thirty-three years as a fluent and able speaker, always defended the Academy in the contests which that learned body had to sustain, and, when chairman, acted with great tact and ability. Shortly before Orfila's death, only five of the original seventy members were left, and it was remarked that Orfila was again the youngest amongst them.

The revolution of 1830, which carried Louis Philippe to the throne, became, for Orfila, the beginning of a series of prosperous days, in which wealth, honors, and the most envied appointments were showered upon him. But it may be said to his praise, that he rendered the greatest services, both to the state and to learning, in the several responsible and eminent posts which he successively occupied.

As Dean of the Faculty of Medicine, (in which dignity he succeeded the celebrated Antoine Dubois, father of the present accoucheur, Paul Dubois,) he used his best efforts, for a period of eighteen years, to introduce improvements of great importance in the medical school. Without neglecting toxicology or his professional duties, he began to root up abuses, and to make regulations which to this day call for the gratitude of the students. Lectures, by his endeavors, were now given with regularity; the pupils were subjected to a wholesome discipline; the miserable building opposite the Faculty, was demolished, and a new one, called "Hôpital des Cliniques," erected in its place, where surgery and midwifery are carefully taught; new dissecting-rooms were substituted for the wretched places where anatomy was before cultivated; the Dupuytren museum was founded; a botanical garden opened; and the anatomical and pathological collections of the Faculty so enriched, that Orfila's name was attached to them as a lasting memorial of his wise and paternal government.

But Orfila was now called upon to take an active share in the higher branches of the administration connected with learning and medical science; his influence became immense, but he contrived to make many friends, and to render the greatest services by his great aptitude for public business, his vast experience, quick glance, and mastery of details.

Orfila successively took his seat in the Council General of Hospitals, and at the Board of Public Instruction. The profession gained much by his elevation, for it was through his exertions that the preparatory schools of medicine in various large provincial town were founded, and it was he who placed the examinations for the degree of Doctor of Medicine upon the present excellent footing.

The subject of this memoir obtained the usual marks of high favor at the hands of Government, and was successively made knight, officer, and commander of the Legion of Honor. He became accustomed to guide and regulate, and when the exalted man was thrust into private life by the destructive revolution of 1848, he felt the blow very acutely, and never recovered the shock.

Among all the claims which M. Orfila has to the gratitude of his countrymen there is one which will certainly be highly prized among us, and will remind our readers of those worthy members of our profession who, in England, have founded societies for the relief of the decayed medical man, his widow, or children. M. Orfila, at the period to which our narrative has arrived, founded a provident association for the benefit of medical men or their families; and for many years he was the President of the society. He constantly used his best efforts to promote its welfare, and succeeded in establishing it upon a sure and lasting basis. This society was not forgotten in the munificent legacies which M. Orfila made shortly before his death, and to which we shall presently allude.

But human prosperity is fragile; M. Orfila's career of usefulness and benevolence was arrested by the fall of Louis Philippe; he lost all his appointments, (except his professorship, which could not be taken from him,) and it is said that these changes have, to the hour of his dissolution, preyed upon his mind, and even hastened his death.

M. Orfila was not only displaced as Dean of the Faculty, but roughly called to account respecting the improvements and embellishments which had been made during his tenure of office; and the worthy and eminent man was, by envious detractors, sadly worried and taken to task. He endeavored to find comfort in scientific pursuits, and tried to regain his shattered health by a journey to the Pyrenees, but his friends saw that his powers were gradually failing.

Only a few weeks ago, M. Orfila resolved to make all his benevolent legacies before his death, a sort of defiance (as justly mentioned by Prof. Bérard) which the leveller of all human greatness resented by speedily snatching at his prey. More than £4000 were thus given by M. Orfila; firstly, to the Academy of Medicine, for prizes on medico-legal questions; secondly, to the Faculty of Medicine, for the preservation of the museum; thirdly, to the School of Pharmacy, for prizes; and to the Medical Benevolent Society for its praiseworthy purposes.

A very short time after these munificent gifts were announced, and whilst grateful addresses were being sent from all parts of France, M. Orfila was attacked with pneumonia, soon after his last lecture, delivered on the 4th of March. Drs. Chomel, Andral, and Rostan attended him with the greatest solicitude, but it was soon too plain that the illustrious patient must sink. He expired at half past seven in the morning, on

the 12th of March, and had, thirty-six hours previously, sought the comforts of the Christian religion.

The funeral was as numerously attended as that of Dupuytren and Broussais; all the distinguished men in the arts, sciences, medicine, and the government, as well as crowds of students, accompanied the remains of this great and good man to their last and peaceful abode. The corners of the pall were held by M. Berard, Inspector of Public Instruction; M. P. Dubois, Dean of the Faculty of Medicine; M. Dubois, (d'Amiens,) Perpetual Secretary of the Academy of Medicine, and M. Bussy, Director of the School of Pharmacy. Orfila is buried close to the tombs of Lisfranc and Barruel, the latter of whom was his first and much revered teacher.

The works left by M. Orfila are the following: 1. On Forensic Medicine, with an Appendix on Legal Exhumations, with twenty-six plates, four vols., fourth edition in 1848; 2. Elements of Medical Chemistry, two vols., eighth edition in 1851; 3. On Toxicology, two vols., fifth edition in 1852; and a great number of papers and reports on Toxicology and Forensic Medicine, which have so largely contributed in placing both sciences on their present improved footing, and have gained for their author an imperishable fame.—*London Lancet.*

Death of Robert James Graves, M. D.—This distinguished Irish Physician, whose numerous and valuable contributions to Pathology and Practical Medicine, in the Medical Journals, have made his name familiar to the American as well as European profession, died in Dublin, on the 20th of March last, at the early age of 56.

He was the youngest son of a dignitary of the Irish church, the Rev. Richard Graves, D. D., Dean of Ardagh, and was educated at Trinity College, Dublin. He graduated in Medicine at the Dublin Medical School, and after passing three years in visiting the chief Continental Schools, in 1821, commenced the practice of medicine in Dublin. He soon took part in the establishment of a private school of medicine, and having been elected one of the Physicians of the Meath Hospital, entered with great energy and zeal on the arduous career of a medical teacher. The school of which he was one of the founders, known as the Park street School, (now the site of St. Mark's Ophthalmic Hospital,) rapidly acquired a very high character. Here he first taught medical jurisprudence, subsequently pathological anatomy, but afterwards became associated with Doctor, now Sir Henry, Marsh, in the Chair of Practice of Physic. The Meath Hospital, however, was the great theatre of his most important labors. Here he set himself vigorously to work to reform the existing system of medical education. Hitherto, the student had to depend on himself for the acquirement of a knowledge of disease. Books were written, and lectures delivered, both of which avail but little without that actual practical knowledge of the various phenomena of disease to be gained at the bedside alone. Some years previously, it is true, Dr. William Stokes had commenced the system of actually instructing the student

by the bedside; but it remained for Dr. Graves thoroughly to incorporate clinical instruction with the other elements of medical education, and to cause its immense importance to be fully and generally understood and recognised. He soon found apt and zealous pupils, and many of the best and most accomplished practitioners now in Ireland, England, the Colonies, and the public service, were then numbered among Dr. Graves's class at the Meath Hospital, and many have lived to acknowledge with pleasure and pride the obligations they owed to his teachings, and the stimulus which his example lent to their exertions. Two among the number must be specially named—Dr. Richard Townsend and Dr. William Stokes, now Regius Professor of Physic in the University of Dublin. Of the latter it is not here the time or place to speak. To the former we may be allowed to pay a brief but well deserved tribute in passing. Hurried away by an untimely death, the works which he has left only serve to show how deeply the Irish school has to deplore the loss of one whose early labors gave such sure presage of a brilliant and successful career. Those acquainted with the literature of thoracic pathology will not need to be reminded of his essays in the "Cyclopædia of Medicine."

Thus energetically and ardently working and teaching, the example of Dr. Graves at this period exercised the best influence on the medical youth of Dublin. His labors, however, were not confined to those of teaching. From an early period in his medical career he evinced the highest talents for original observation, and the results of his inquiries began to appear in print, and to attract attention, from the masterly style of his delineations of disease, his graphic manner, and the clearness, judgment, and decision with which his views were enunciated.

Dr. William Stokes having graduated in Edinburgh, and having subsequently been appointed Dr. Graves's colleague at the Meath Hospital, these two names are henceforth to be met with together as teachers and fellow-laborers in the field of original research. Under their joint editorship appeared the valuable series of Meath Hospital Reports, which have connected the name of this institution with the progress of Irish medicine during the last thirty years.

In the year 1827, Dr. Graves was elected Professor of the Institutes of Medicine to the King and Queen's College of Physicians in Ireland,—a chair which he continued to fill for many years with great distinction. One of his most distinguished pupils thus speaks of Dr. Graves's success as a teacher in this department:—"I am glad to acknowledge my own obligations to the similar chair (Institutes of Medicine) in the University of Dublin, filled then by my distinguished friend, Professor Graves, well known throughout Europe by his contributions to physiology and clinical medicine. From him I first imbibed a taste for physiological inquiry; and under his guidance and direction my first studies upon that subject were pursued."—*Dr. Todd's Farewell Address.*

As a reformer in practice, Dr. Graves has done invaluable service; and in no respect more so than as regards the treatment of the typhus fever of Ireland. This disease, always endemic in the sister island, occasionally breaks forth as an epidemic visitation of the most fatal kind,

and several years are popularly memorable as "the fever years." Such were 1817, 1822, and lastly 1846–47. Having enjoyed ample opportunities of studying this fatal pestilence, Dr. Graves became not less distinguished as a practitioner than as a teacher and propagator of bold and enlightened views in the treatment of fever; and on no occasions were his *cliniques* at the Meath Hospital better attended than when it was known that fever was to be his theme. The views of treatment which prevailed at the period when Dr. Graves entered on practice were decidedly in favor of the lowering and depleting plan, whether by purgation or otherwise. In this respect, practice differed then very much from what it had been in the latter end of the preceding century. In the days of Harvey, Purcell, Cleghorn, M'Bride, Plunkett, Egan, and Quin, the tonic plan was followed, and with success; wine and other stimulants were freely exhibited. The propagation of the Hunterian pathology had, however, in subsequent years, filled the minds of men with antiphlogistic theories, to the exclusion of all others, and in these views the Dublin practitioners, with some honorable exceptions be it remarked, very freely shared up to the date of Dr. Graves's teachings. An intimate study of the disease, and a careful observation of the alarming symptoms of early prostration so common in Irish typhus, convinced Dr. Graves of the error of the practice in vogue, which consisted chiefly in withholding nourishment and administering purgatives. Against this system he took up arms, and waged a successful war, not, it may be imagined, without violent opposition. His views, however, soon gained converts, and, aided by his colleague and other enlightened practitioners, the old plan gradually gave ground to the new. There was nothing in which Dr. Graves took more real pleasure and pride than in the changes in practice thus brought about. "Let them write it as my epitaph, that I fed fevers," said he, on one occasion, to his colleague.

The careful support of the system by nourishment from an early period of the disease, and the courageous use of stimulants when indicated by symptoms of depression, now form the leading therapeutic principles in the management of fever cases with all the well-educated practitioners of the Irish school; but unquestionably to Dr. Graves is due the merit of promulgating these views, or at least of reviving the practice, which had fallen into disrepute since the days of the Quins and the Plunketts. Did our limits permit, we could dwell at considerable length on other important principles of treatment advocated by Dr. Graves. We can only refer to his papers "On the Use of Tartar Emetic and Opium in the Delirium of Fever," "The Employment of Acetate of Lead," etc. etc., all which will be found in his collected treatises on clinical medicine.

Independently of the publication of his various detached papers and monographs, Dr. Graves lent valuable assistance to the establishment of a periodical medical literature in Ireland. In the year 1830, the fifth and last volume of the "Dublin Hospital Reports" was committed to his editorship by Dr. Cheyne. Two years subsequently, the *Dublin Journal of Medical and Chemical Science*, the predecessor of the *Dublin*

Quarterly Journal of Medicine, was projected and established by Sir Robert Kane, then a student of medicine, and a pupil at the Meath Hospital. After the appearance of a few Numbers, Drs. Graves and Stokes became associated in the editorship of the periodical, and Dr. Kane having been soon forced to resign his connexion with it by his increasing devotion to chemical inquiry, it continued in the same hands till 1842.

In the original and review department of this journal, Dr. Graves was a large and constant contributor. In the year 1843, appeared the first edition of his "Clinical Lectures on the Practice of Medicine." Of this work, which passed through a second edition with much careful revision, and the addition of much valuable matter under the hands of Dr. Neligan in the year 1848, it is quite unnecessary for us to speak. It is well known to every clinical school in Europe.

As a lecturer, Dr. Graves was distinguished by a force and clearness of language, and an earnestness of manner, which irresistibly commanded attention, while his fine person and noble features won the admiration of his hearers. His style as a writer was at once simple yet nervous, and full of graphic power; and his delineations of disease are among the most successful of modern medical compositions. He was a strenuous advocate of the doctrine of contagion, and vigorously opposed the views advanced with regard to the non-contagious nature of cholera during its last outbreak. He was a firm supporter of the dignity and honor of his profession, and on the only occasion on which he descended into the arena of medical politics, he fought boldly and fearlessly, though unsuccessfully, for the rights of his brother practitioners. During many years Dr. Graves enjoyed a large and lucrative practice, and was much *recherché* as a consultant. For some time past his health had been only indifferent, and of late he suffered from attacks of atonic gout. His last illness was attended with considerable suffering, the lungs being much congested. He had also violent paroxysmal attacks of cough, which the slightest exertion was sufficient to induce. Symptoms of a purpuric condition of the blood, accompanied by anasarca, were subsequently manifested. These sufferings were borne with Christian fortitude and complete resignation. Dr. Graves expired in the forenoon of the 20th of March, at the age of 56.—*Lon. Med. Times & Gaz.*

RECORD OF MEDICAL SCIENCE.

MATERIA MEDICA AND THERAPEUTICS.

Dr. Bernard's Experiments on the Elective Elimination of certain Substances by the Secretions.—Dr. Cl. Bernard has written a very interesting account of certain experiments made by him "on the elective elimination of certain substances by the secretions, and in particular by the salivary secretion." He remarks *in limine* that this secretion has not been examined with the same care as the urine, bile, milk, &c., in

regard of the circumstance alluded to; and that it remains to be explained how the saliva chooses some, while it rejects other substances equally soluble in it. He performed two sets of experiments, which were ingeniously contrived and carefully repeated.

In the first series of experiments he injected into the right jugular vein a solution of yellow prussiate of potash, of iodide of potassium, and of grape sugar, and immediately thereafter he detected the second substance in the saliva, but neither of the other two; while in the urine, the prussiate of potash could be detected, but neither the iodide nor the sugar. Twenty-five minutes after the injection, abundance of the prussiate of potash was found in the urine, only a trace of sugar, but still no iodide. The saliva remained as before. The secretions were tested every half-hour, but no change occurred till the end of two hours, from the time after injection, when the iodide of potassium at length appeared in the urine. Neither the prussiate nor the sugar appeared at any time in the saliva, which eliminated only the iodide of potassium; and it is worthy of remark that this salt appeared immediately in the saliva, while it was not detected in the urine for two hours. When, however, the solution of the iodide was stronger, it appeared sooner in the urine, though never within the hour.

In the second series of experiments, M. Bernard injected these three substances in solution, severally into the veins of the same animal at different times, as well as into the veins of different animals, and he always found that they comported themselves in exactly the same manner. Such was the case, likewise, when they were introduced into the stomach. Both grape and cane sugars, like the prussiate of potash, never appeared in the saliva, while they were eliminated more slowly by the urine. This observation seemed to contradict the assertions of some authors, regarding the saliva of diabetic patients, but on actually testing this secretion in 'la Charité,' M. Bernard found that there was no trace of sugar in the saliva, while, however, it could be detected in the expectoration from the bronchi, of such patients as had phthisis combined with diabetes. Neither sugar nor prussiate of potash would seem to pass into the bile, or into the pancreatic juice, in ordinary circumstances, but when sugar was strong in the blood, it was found in the bile, but never in the pancreatic juice.

In regard to the elimination of sugar from the economy, M. Bernard has noted a very curious fact, viz., that though the mammary secretion naturally contains a kind of sugar, it does not allow either cane or grape sugar to pass by it. Sugar of milk is much more difficult of fermentation than the other kinds of sugar, and may thus be distinguished from them.

When the iodide of potassium was injected into the vein of a dog, or introduced into its stomach, it could always be detected in the saliva within forty seconds. It also passed with rapidity into the tears, and into the pancreatic juice, while it passed with much greater slowness into the bile, in which it was often difficult of detection.

M. Bernard also injected lactate of iron into the veins of dogs, and never found it eliminated by the saliva; in which respect it agreed with

the sugars and prussiate of potash. When iodide of iron was carefully injected into the vein of a dog, both iodine and iron were found in the saliva. In another dog, a solution of the iodide of potash was introduced into the stomach, by a fistulous opening, and afterwards another solution of lactate of iron; both substances were thereafter detected in the saliva, showing that the iodine gave to the iron the capability of being eliminated by the saliva.

M. Bernard at present merely wishes to call attention to these interesting facts, and does not offer any explanation of them. But the property which certain substances seem to possess, of being eliminated by different secretions, is not their only peculiarity. Their period of sojourn in the economy is also importantly different. Thus, M. Bernard remarks, that the iodide of potassium and other substances, perfectly soluble, and really dissolved in the blood, remain for a certain time within some of the organs of the body; and he finishes his paper with the following account of the experiments made by him, in order to investigate this sojourn of the iodide of potassium in the animal economy.

He introduced into the stomachs of several dogs, which had permanent salivary and biliary fistulæ, a solution of two grammes of iodide of potassium. The same day the urine of these dogs exhibited the reaction of the iodide; next day it could be detected neither in the bile nor in the urine; and on several days following, no trace of it was found in these secretions. It seemed to be completely eliminated from the system; but examination of the saliva showed its presence still. The gastric juice also contained the iodide, both because it contained saliva, and also because it was furnished directly with it from the mucous membrane of the stomach. This persistence of the iodide in the saliva and gastric juice continued for three weeks, and possibly it may have continued longer. Purgatives have a great effect on the sojourn of the iodide in the economy; indeed, so much is this the case, that if purgatives were employed, soon after the introduction of the salt into the stomach, a few days sufficed for its total disappearance from all the secretions.

In concluding, M. Bernard observes, that these experiments show that substances which are soluble, and capable of circulating in the organism without producing mischief, present two sets of phenomena worthy of remark.

"1st. Some substances never pass into certain determinate secretions, *e. g.* the yellow prussiate of potash, cane and grape sugars; others show themselves in all the secretions, only with greater or less rapidity, *e. g.* the iodide of potassium.

"2d. Some of these substances are eliminated completely and rapidly from the economy, *e. g.* the yellow prussiate, sugars, &c.; while others are only *partially* eliminated by the urine, and may remain in the organism, showing themselves in other secretions for a longer or shorter time. The iodide of potassium offers a remarkable example of this prolonged sojourn of soluble substances in the organism,—a sojourn which, in the case of that salt, is prolonged, because the portion not eliminated and re-appearing in the saliva, instead of being expelled from the system

is constantly thrown back into the stomach, whence it is taken up by the circulation, and returned to the saliva, and so on.

"The chief conclusion," he continues, "to be drawn from this work is, that one cannot refer to any general law, the manner in which these substances act in the organism. The experiments made on one saline substance, can teach nothing regarding another: no one could have foreseen, for example, that the iodide of potassium, and the yellow prussiate of potash, salts equally soluble, should offer, in respect of their passage into the secretions, and of their elimination from the body, differences very striking. Special researches on each particular substance are necessary, in order to establish physiological history, which ought to be intimately connected with its mode of action as a therapeutic agent."—*Archives Générales de Medecine, January*, 1853.

Case of Suffocation Produced by Sulphuric Acid.—The interest of this case lies in the fact that death was caused by the action of the acid on the respiratory passages, without touching the organs of digestion.

A woman was found dead in her bed-room; she was seated on a chair, her head bent back, resting on the bed, and drooping towards her right shoulder. Her mouth was full of tough mucus, the lips, teeth, and gums presented the appearance of being corroded by an acid. Her right hand, placed across the body, held a small phial labelled *sulphuric acid, (poison.)* It contained about half a drachm of the acid. Death had occurred a considerable time before; the extremities were already cold.

Autopsy.—The tongue was contracted, the epiglottis corroded and reduced to a little triangular tongue with indented edges. The vocal cords were destroyed, particularly the right. The mucous membrane of the trachea was also removed, and the cartilages had the appearance of being dissected. The acid had penetrated into the two lungs, attacked the parenchyma, perforated the left pleura, destroyed the costal layer, and roughened the subjacent ribs.

On the surface of the lung there was a layer of sulphate of lime; the arch of the aorta, the superior cava, and the innominata veins contained clots having the appearance of dried wax. No trace of acid could be found in the stomach or œsophagus. The epithelial lining was quite entire, and the stomach only contained some mucus.

Dr. Gall remarks, "that he believes no similar case has been recorded. It is well known that the impression produced instantaneously on the tongue by the caustic, occasionally causes contraction of the pharynx sufficient to prevent deglutition, and death has been caused by the progress of the inflammation and tumefaction of the pharyngeal mucous lining and tonsils, when not a drop of acid has entered the stomach; but no case has hitherto been recorded in which the acid had penetrated into the bronchial tubes. Could this have been caused by a fit of coughing raising the epiglottis, and drawing the liquid into the trachea? Probably enough, and the acid afterwards would have run gradually into the minute ramifications of the tubes, causing corrosion as it passed along."—*Glasgow Med. Journ. from Dr. Gall in Journal de Chemie Médicale.*

PATHOLOGY AND PRACTICE OF MEDICINE.

Note on the Breathing-Movements in the two Sexes, and on the alleged Influence of Stays in producing Pulmonary Consumption. [Excerpt from a Clinical Report.] By W. H. WALSHE, M. D., Fellow of the Royal College of Physicians, London; Professor of Medicine and Clinical Medicine at University College, London; etc.—Here, then, gentlemen, is a woman, (laboring under dilatation of the heart, with probable tricuspid regurgitation, and old pericarditis, general bronchitis, congestion, and œdema of both lungs,) whose maximum thoracic respiration-movements are translated from the upper to the lower regions of the chest. Her breathing-play is inferior-costal and abdominal, instead of being infraclavicular. She breathes, under the influence of her complicated malady, as the healthy male, and may be said to be *unsexed, quoad respiration*, by her disease. Observe, however, that this perversion only holds in *calm* breathing; the moment she takes a *forced* inspiration, the infraclavicular regions rise abruptly, fully, and equably, (she is non-tuberculous, be it remembered,) after the type of health. In the state of forced respiration she breathes—at least in the present point of view—precisely as both sexes breathe when the contents of the thorax are sound.

What is the cause of this perverted condition of breathing-movement in the female, when laboring under certain thoracic diseases? A preparatory point to determine is, the *how*—and, if possible, the *why*—of the difference in the calm breathing-movements of the sexes in health. And to this preliminary question we will confine our inquiries to-day.

The healthy, calm breathing of the male is essentially effected by the descent of the arch of the diaphragm; the amount of abdominal is greater materially than of pectoral expansion-movement; and the former commences sensibly before the latter, which is, besides, confined almost exclusively to the lower ribs. The male action is inferior costo-abdominal. But is not the ordinary breathing of the female carried on by similar play of the diaphragm? Judging from outward appearances, no. In the female the abdominal expansion is almost null, and always slightly posterior in point of time to the upper costal; neither do the lower ribs move notably, whereas the clavicles and infraclavicular regions rise and fall with freedom. The male seems to the eye to breathe with the abdomen and lower ribs from the sixth downwards; the female with the upper third of the chest alone. These statements refer to adults only.

To adults only, I say; for it is yet a point *sub judice*, whether, and to what proportional extent, the discrepancy of adult life prevails in infancy and early youth. I have examined a considerable number of female children, aged between four and ten years, who had never worn stays, or any substitute for these, and found in them the predominant infraclavicular action of the adult. But the excess of upper movement is very positively less than among their seniors. On the other hand, Boerhaave, one of the earliest observers of the difference in the respiratory action of the sexes, speaks as though the boy and girl of "one year old" breathe as distinctively, the one with the abdomen, the other with the

chest, as the full-grown man and woman. *Per contra*, Beau and Maissiat affirm, that in earliest infancy, and often up to the third year, the respiration is abdominal in the female as well as in the male. It has appeared to me, too, that in earliest youth, when the pectoral and ventral modes of breathing become obvious, the chest action in the female is more *general* than at a later period, and less limited to the upper regions. Age, then, does seem to me to exercise an influence upon, or to be connected with, the typical breathing of the sexes.

Social position exercises none; the washerwoman and the peeress breathe exactly alike.

The habit of forced breathing is not without modifying power on the calm action in both sexes. For instance, the extensive play of the upper regions in full-chested *soprani*, kept up in the exercise of their art for many hours daily, ends by increasing the amount of infraclavicular movement in ordinary conversational breathing. It has appeared to me, that, even in *tenor* singers, some perversion of the ordinary condition—some degree of unnatural infraclavicular movement—may be detected in calm respiration.

But what influence does dress exercise? Looking at an adult female, and remembering her habit of drawing in the lower ribs by apparatus more or less unyielding, the inference seems unavoidable, that the reason why a woman does not breathe like a man is, that her mode of dress mechanically obstructs phrenic play. Certain mischiefs entailed by tight lacing we see positively in displacement of the liver; in mis-shapement of it, so that its height is made to exceed more or less its breadth, (as ascertained the other day, for instance, in the body of E. Smith, University College Hospital Female Case-Book, Vol. IX., p. 130;) in alterations of its texture, so that true lobular substance is replaced to a greater or less depth by induration-matter functionally inert. We see them exhibited in displacement of the heart,—in narrowing of the lower intercostal spaces, etc. And if, from certain of the facts concerning age just passed in review, we are forced to the admission, that the activity of infraclavicular respiration-movement in the female is in the main designed by nature, and independent of extraneous influence, still I cannot help thinking that the great excess of that movement, and the limitation of thoracic play to the upper thorax in the civilized adult female, are due in no small measure to the use of unyielding cases interfering with inferior costal and phrenic action. The agricultural female laborer, who knows not stays, breathes more like a male than a town female. Besides, during sleep, the conditions of pectoral and ventral action in the female are much less strikingly different from those in the male than in the waking state; the waist is relieved for a time from constriction. And, further, the male and female dog breathe almost exactly alike, as do also the horse and mare; the action is abdominal and lower costal.

It would seem, then, that stays are in part productive of the peculiarity of adult female breathing, but certainly are not its sole cause. Boerhaave, and his commentator, Haller, however, holding that the sexual difference obtains from birth, looked upon the free upper costal action in the female as a pre-ordainment to meet the difficulties of preg-

nancy. "Nisi hanc," says Boerhaave, "in fœminâ diversitatem natura fecisset, gravidæ perpetuâ dyspnœâ laboravissent, æque ac viri hydropici." But it seems here to be forgotten, that if the illustration be sound, ascitic females ought to escape dyspnœa. The final cause of the difference in the sexes is of less interest, however, than the mechanism by which it is actually worked out; but of this, also, nothing is known. Haller ascribed the predominant costal action in females to the greater flexibility of their bones and cartilages (Op. Cit., pp. 98, 145.) The upper interspaces are relatively wider in the female, the lower in the male; but is this effect, or cause, or neither one nor the other?

I have just reminded you of some of the evil influences exercised by the use of tightly-laced, unyielding stays on the liver. Do they inflict mischief on the lungs? It appears to me this will altogether depend on the amount of constriction. If this be simply sufficient to transfer the maximum chest-play from the base to the apex of the thorax, (or, rather to magnify somewhat the breathing difference superiorly and inferiorly natural to the female,) I cannot very clearly descry what evil is to come to the lungs, especially if the stays be cut bias, and be formed of yielding material. If, on the other hand, rigid wood-work or metal plates be used to stiffen stays of which the main material is hard and cut straight, then it is conceivable, *à priori*, that serious evil may come to the lungs. Remember, however, the wide difference in the statical and dynamic mechanism of the thorax and abdomen, and you will feel at once that the fact of serious compression of the liver being produced by tight lacing gives no shadow of proof that the pulmonary organs must suffer to similar amount, or even in similar fashion. I know not, as matter of clinical experience, what the mode of disturbance is which constriction of the base of the chest actually and demonstrably entails on pulmonary action or pulmonary structure. But such ignorance as this is not commonly avowed; on the contrary, the mass of information on the point is held to be positive and of ominous, most ominous, quality. Dr. Copland, for instance, writes, in a recent and otherwise admirable article, that the use of stiff stays produces "ultimately a morbid state of the blood, *tubercular deposition, especially in the lungs*, hæmoptysis, anæmia, etc." But it may be fearlessly asserted, that neither Dr. Copland, nor any other man living, could prove that the abuse of stays produces the specific disease, tubercle. I look in vain for evidence of such power in the writings of those who most loudly proclaim its existence; declamatory passages, arguing *à priori* from a loose physiology to a yet looser pathology, are all I have ever succeeded in finding—at least, with one seeming exception—a seeming one only. Mr. Farr, in truth, speaks thus: "Thirty-one thousand and ninety English women died in one year of the incurable malady, consumption. Will not this impressive fact induce persons of rank and influence to set their countrywomen right in the article of dress, and lead them to abandon a practice which disfigures the body, strangles the chest, produces nervous or" [this "or" is probably the "etc." of Dr. Copland] "other disorders; and *has an unquestionable tendency to implant an incurable hectic malady in the frame.*" Strange, Mr. Farr should forget to compare the relative mor-

tality of the sexes in elucidating this question. Look at this table giving the mortality from consumption in three years to a million living of each sex in England and Wales:

YEARS.	Deaths from Phthisis to 1,000,000 living of each Sex.	
	Males.	Females.
1837	3,771	4,155
1838	3,783	4,077
1839	3,722	4,015

What evidence does this table give of the dependence of tuberculization on stays? It simply shows that the phthisical mortality of females is somewhere about 300 per 1,000,000 living greater than that of males. Granting that the female excess is really due to stays, what scientific justification does its amount give of Mr. Farr's startling phrases? None, absolutely none. But let me assure you, no particle of evidence exists that the moderate excess of female destruction is really traceable to the abuse of stays. Not a few arguments might be adduced, tending to prove their absolute innocence. Thus, in France, as is well known, females rarely use stays until the afternoon; in England, women tighten themselves up the moment they rise in the morning; yet the excess of female phthisical mortality over the male is greater in France than in this country. Again, in certain parts of Europe, the men tighten themselves at the base of the chest, so as to produce a tolerably fair image of the figure of a wasp, and yet they do not seem thereby to increase their relative quota of phthisical mortality. Further, it will be conceded, that tight lacing is, as a rule, pushed to greater lengths among metropolitan than among rural female populations; so that, if the influence assigned to stays be other than a figment of the brain, the plus destruction of women over males ought to be relatively greater in London than in the country. Now, such evidence as I can get at tells in precisely the contrary direction. Thus, examine these figures:

Kent County.

	Males.	Females.
Population in 1841 - - - - -	232,228	236,885
Absolute deaths from Phthisis - - -	726	778
Deaths from Phthisis per 1,000,000 living -	3,126	3,242

Metropolis.

Year.	Males.	Females.
Population in 1838 - - - - -	913,077	971,767
Absolute deaths from Phthisis - - -	4,057	3,630
Deaths from Phthisis per 1,000,000 living -	4,443	3,735

So that, actually, where, by fair inference, the amount of stay-constriction is greatest, and its prevalence widest, (in the Metropolis,) females are destroyed by phthisis to a less degree than males; whereas, amid a country population, which we may honestly assume to undergo a less mean amount of tightening, females die consumptive in notably larger proportion than males.

No, gentlemen, if the abuse of stays produces consumption, its power to do so most indubitably remains to be proved; and while the laws of

an enlightened pathology point to the excessive improbability of an essentially diathetic disease springing from a mechanical cause, I entreat you not to adopt the popular creed, that "stays cause consumption," unless on direct and unimpeachable logical evidence. There is quite enough in the demonstrable evils entailed by tight lacing to justify you in warring against the abuse; you have no need to support your arguments by the unfair appeal to an imaginary mischief.—*London Med. Times and Gaz.*

Case of Bite of a Young Woman by a large Cobra de Capello. By WM. CHALMERS, M. D., lately Surgeon H.E.I.C. service, Bengal.—On 25th of June, 1819, at 11 P. M., I heard from the outside of my house, at Barrackpore, near Calcutta, a loud call for my immediate attendance. It proved to be from Colonel, afterwards General Sir Wm. Lumley, whom I found with a lanthorn in his hand, entreating me for God's sake to come with him at once, as his *mehturanee* (female sweeper) had been bitten by a cobra de capello. I took in my hand a phial of solution of ammonia, of the usual strength, a case of scalpels, and a large sized elastic gum male catheter. On arriving at the hut occupied by the poor woman and her husband, I found her stretched outside on the ground, her head resting on her husband's knee. Her body was cold and collapsed; there was neither breathing nor pulse; her eyes were wide open, and insensible to light; the mouth was also wide open; tongue cold; in fact life was, to all appearance, extinct. How long she had lain in this position could not be ascertained; her husband conjectured an hour at least. On the back of the right hand were discovered two punctures, as if made by a needle, about an inch and a-half apart, marking the entrance of the poisonous fangs of the snake. Upon each puncture there was a drop of nearly colorless fluid, without any hæmorrhage, tumefaction, or ecchymosis.

Here was a case sufficiently discouraging, if not, to all human appearance, hopeless. However I resolved not to abandon the poor sufferer, while the kind-hearted master entreated me to do what I could.

Ordering bricks to be heated for application to the præcordia and the feet, the first step of the treatment was to pour down her throat a teaspoonful of the ammonia, with as much water, but all power of deglutition being lost, some difficulty was experienced in accomplishing my object. By the aid, however, of the catheter as an œsophagus tube I succeeded admirably. The next step was to cut out and pare off the integuments and subjacent cellular and muscular tissues, extending my incision about one-fourth of an inch beyond the punctures. From the large wound, which was of an oval shape, not a drop of blood escaped in this operation. The husband was now directed to apply his mouth to the wound, and suck with all his powers, which he proceeded to do most readily, the natives having great faith in such a measure. This he continued, with all the energy he was capable of, for fully half-an-hour, without succeeding in procuring any moisture, while I repeated the ammonia steadily every ten minutes, till a full ounce was consumed. At length our perseverance was rewarded by some hopes of a restora-

tion, for the poor distracted husband leaped up in extasy of joy, exclaiming in his own language, "*Kohoo àtá sahib,*" (blood is coming, Sir), showing his tongue covered with the vital fluid. In a few minutes more the action of the heart was faintly perceptible; the pulse at the wrist was just traceable in a thready thrill; she moved her head, gave a deep sigh and sat up. Thus our persevering efforts for nearly two hours, were rewarded by the rescue of a fine young healthy woman from certain death;—in truth her recovery might be considered, without any hyperbole, a resurrection from the dead. The only treatment pursued afterwards was the free cauterization of the wound by *Nitras Argenti*, —the application of a pledget of lint dipped in melted *Ceratum Resinæ*, covering the whole with a hot poultice. The wound healed kindly by granulation, and she was able to resume her duties in a few days.

In this remarkable case the powers of the ammonia were proved most incontestably as a safe and sure remedy, as it has ever since and during my time in India—extending now to a quarter of a century—been esteemed and experienced to be, in all bites of venomous reptiles. Indeed, such is the confidence of the natives in the remedy, and more especially the native soldiery, who in their huts are much exposed to these injuries, that the moment any one gets bitten, he runs to the nearest European officer, calling out for the *Safed Dâwy*, "the white medicine," assured that with a few doses of that, he is safe, and disappointment in the curative effects is never experienced. By "the white medicine" is meant a preparation of ammonia, which used to be imported in great quantities from England, and generally kept at hand by every officer,—the old fashioned *Eau de Luce, Liquor Ammoniæ Succinatus.*

One cannot help regretting, that the medical officers of the hospital into which that poor unfortunate fellow, who was bitten in the Zoological Gardens last year, was admitted, were not apparently sufficiently acquainted with the powers of ammonia in such cases. If they had been, it would no doubt have been had recourse to.—*Glasgow Medical Journal*, April, 1853.

Gangrenous Metastasis from the Lungs to the Brain. By RUD. VIRCHOW.—I have already, in my work upon inflammation of arteries, (Virchow's Archiv., Bd. I., S. 332,) communicated a case where, in a patient who died of gangrene of the lungs, there were found in the mesentery gangrenous deposits, which more minute investigation proved to be lodged within the branches of the mesenteric artery, such deposits having come from the gangrenous lung by the pulmonary veins, and been propelled from the left side of the heart into the systemic circulation. As this form of metastasis has not yet been much investigated, the relation of a fresh case may serve to arouse the attention of pathologists.

Anna Maria Schwing, of Buchold, aged 21, came to the Julius Hospital, May 18th, 1852, suffering from melancholia religiosa, accompanied by occasional maniacal fits. From June 10th to two days before her death, she exhibited the most determined abhorrence of food. From July 8th,

there were symptoms of severe affection of the lungs, characterised by fetid and blood-stained sputa, paroxysms of asthma, and uncontrollable fits of cough. Her excited state prevented a more accurate examination. Death ensued August 8th, at a quarter past seven A. M., without any further cerebral symptoms.

Examination of the Body, August 9.—Skull-cap thin, but normal; sinuses empty, but superficial; cerebral veins full; numerous granulations (gland. Pacchioni?) along the sinus long.; considerable serous effusion at the base of the skull and in the ventricles; cerebral substance firm. In the left ventricle, and extending over both the optic thalamus and corpus striatum, there was a discoloured, dirty grey surface, under which was a whitish semifluid, or crumbling mass of limited extent. Upon further examination, four similar spots were seen upon the posterior surface of the hemispheres, under the pia mater, and in the sulci; they consisted of a white, semifluid, stinking substance, surrounded, as in the ventricle, by a dirty grey circumference. The microscopical appearances of this substance showed that it consisted of an amorphous granular detritus, with long, spear-shaped, fat crystals, (such as I have shown to occur often in gangrene of the lung,) pigment masses, and altered blood-discs. Parts of the mass were traced, under the microscope, into the arteries of the pia mater.

Old adhesions on both sides of the chest; recent effusions of lymph over gangrenous portions of the visceral pleura. The right lung was torn in separating its adhesions; and, from the fissure, there issued a thick, dirty, grey, and partially brownish, stinking substance, which had been enclosed in a cavity with defined walls. There were many other similar accumulations scattered throughout the pulmonary substance, one as large as a hen's egg. The microscopic characters corresponded with those mentioned in the cerebral deposit.

It may be inferred, that, in consequence of imperfect nutrition, gangrene of the lung first ensued; then small granular particles became detached, entered the left side of the heart by the pulmonary veins, and thence were driven through the carotids to the pia mater, where they spread the decomposing process to the structure of the brain. The spots were of limited extent, the surrounding vessels and tissues being normal.—*Virchow's Archiv.*, 1853.

Dr. Kirkes observes, in speaking of the detachment of fibrinous deposits from the interior of the heart: "The finely granular material resulting from their disintegration, mingling and circulating with the blood, may give rise to various disturbances indicative of a contaminated state of this fluid, producing symptoms very similar to those observed in phlebitis, typhus, and other analogous diseases." This remark may be extended to disorganization going on in the lungs, and perhaps in other organs; and the cases related by the different authors who have written upon this subject should stimulate those upon whom the responsibility of making *post-mortem* examinations falls, to investigate, more thoroughly than has heretofore been done, the condition of the interior of arteries and veins, both in their main trunks and in the immediate proximity of diseased tissues.—*Lon. Med. Times & Gaz.*

OBSTETRICS.

Treatment of Chronic Abscess of the Breast and Milk Fistulæ.—Employment of Iodine Injections. [Cases under the care of Mr. BIRKETT.] —We have been much gratified by watching the result of the treatment pursued by Mr. Birkett in several cases of chronic inflammation of the breast, attended with sinuses and long continued suppuration, which have recently been under his care. This form of disease, as the result of neglected milk abscess, falls, we have no doubt, pretty frequently under the observation of most of our readers, and is often very troublesome to cure. The breast becomes affected with solid œdema, the sinuses, usually running in several directions through and behind the gland, are most difficult to close, and, by the constant discharge from them, the patient's powers become much undermined. In an extreme case of this description, which had lasted for many years, we not long ago saw Mr. South perform excision of the whole diseased mass, believing that to be the shortest method of getting rid of a useless part, which had become a serious evil to the patient. The remedies usually employed, are, as it is well known, support to the part, and the laying open freely of the sinuses, or the injection of them with various irritating fluids. Mr. Birkett's treatment consists in the employment of iodine taken internally, applied as an ointment over the tumor, and used also as an injection for the sinuses, whilst at the same time the part is carefully supported and subjected to gentle pressure by means of a bandage. The power of iodine, as a means of exciting the absorption of inflammatory products is well known; and, as an application to the lining membrane of sinous abscesses, it has for some time been employed on the Continent, and, less generally, in this country also. The success which has attended Mr. Birkett's method of treatment has been, as the following case will show, most encouraging.

Elizabeth Wiles, aged 26, the wife of a farm laborer, was admitted January 6th, 1853. Three years ago, while suckling, she suffered what from her description would appear to have been an attack of acute inflammation, both of the left mammary gland and of the surrounding structures. Her child was then eleven months old, and the disease appeared to have been excited by inflammation of the lymphatics of the arm from a sore on the finger. It was so severe as to confine her to bed for ten weeks, and to necessitate the employment of great number of leeches. It ultimately subsided considerably without having occasioned any abscess. The swelling, however, never quite disappeared, but after a time it again began to increase; and a year subsequent to the first attack, a large chronic abscess had to be opened, which never afterwards healed. In September, 1852, she was again confined. The disease of the breast having resisted the persevering treatment of several practitioners in the town where she lived, and her constitutional powers being evidently very much reduced by the long-continued and profuse discharge of pus which it produced, she was ultimately recommended to come up to town, in order to have Mr. Birkett's opinion as to the propriety of excision. On admission, she was emaciated, and of a somewhat hectic

appearance; the discharge from the sinuses was very profuse, and the whole breast much indurated. She was then suckling with the right breast.

Mr. Birkett advised her to wean her infant, and ordered her to be confined to bed, with a poultice over the part for a few days, until the state of excessive irritation which appeared to exist had somewhat subsided. He then prescribed for her the following mixture:

℞. Potassii iodidi gr. iij., infus. gent. ℥i., ter die sumend.

The breast to be wrapped in lint spread with ung. plumb. iod., and the whole supported by a bandage carried round the shoulder. On the 23d, the symptoms having already begun to amend, the injection of all the sinuses with the tincture of iodine (London Pharmacopœia) was performed by means of a tube carried to the end of the sinus. The treatment as above was persevered in, and after the expiration of a week the injection was repeated, and again after another space of two weeks. At present, March 15, the sinuses are quite healed; the gland has been reduced very nearly to its natural size, and the patient has gained in general health to a point beyond what she has enjoyed since the commencement of the disease. With the exception of the first few days, she has been allowed to be out of bed the whole time, and full diet has been allowed her. On each occasion that the injection was used, it produced considerable smarting pain, and was followed by a temporary increase of swelling and discharge, which very quickly subsided.

We scarcely need point out the advantages of the above plan of treatment over the old method of laying open the sinuses. In the latter the incisions have to extend wide and deep, and they involve considerable hæmorrhage, and, for a time, increased constitutional irritation and great discharge of pus. Other cases of a similar nature lately brought under Mr. Birkett's charge, in which the iodine cure has been practised, were the result of common milk abscess, from which the above, as will be seen, differs in some particulars.

Prevention *is* better than cure, and, as we believe, there are few diseases more thoroughly within the reach of prophylactic measures, than is milk abscess, we cannot dismiss the subject without saying a few words on that head. The history of this disease is in most cases easily told. A woman of delicate skin is confined, perhaps for the first time; lactation commences, the cuticular investment of the nipple, irritated by the mouth of the child, becomes cracked and fissured, each application of the infant to the breast occasions torment to the mother, and she avoids it as much as possible. The child is allowed to suck only on the sound side, the milk accumulates in the other breast, and slight inflammation is set up, to be aggravated by the increasing dread on the part of the patient of the natural method of relief, the evacuation of the milk. An abscess is the result. Now, how was all this to be avoided? In most cases pregnant women consult their medical advisers on sundry little points some time before their confinements. Let him on those occasions enquire as to the state of the nipple; and should the skin be found to be delicate, the daily application to the part of an alum wash, decoction of oak bark, or some other astringent, should be recommended. By

such means the skin may be hardened, tanned in fact, and rendered just as capable of resisting irritation as that of the finger. In other cases milk abscess depends on the non-development of the nipple. The surgeon should take care that a shield be provided beforehand, and that his patient knows how to use it properly.

But, supposing that, with the greatest care, abscess has proved unavoidable, there are still measures by which the disease may be prevented from passing into the deplorable condition in which we have noted that the patient in the above case came into Mr. Birkett's hands. We have repeatedly heard Mr. Paget observe, that, among his out-patients at St. Bartholomew's, he never has any opportunity for trying the various vaunted injections for the cure of sinuses in the breast, because the latter always heal of themselves. We have very carefully watched Mr. Paget's practice, in which mammary abscesses are very common, and can most fully confirm this statement. His treatment consists in the free evacuation of all collections of matter, and in the internal exhibition of tonics. A generous diet of meat and beer, with full doses of quinine or iron,—such are the remedies under which improvement in the local and general condition of the patient seldom fails to become rapidly manifest. It must, however, be admitted that the applicants, as out-patients, do not include a small class of peracute cases in which the symptoms are often too severe to allow of the patient's leaving her bed. The systematic avoidance of antiphlogistic measures in the treatment of local suppurative inflammations is daily becoming more and more common, and in no respect has modern practice more strikingly advanced than in this. It affords, too, a good illustration of the application of minute pathological research to actual every-day practice. Those of our readers who had the good fortune to hear Mr. Paget's lectures on inflammation, delivered before the College of Surgeons three years ago, will remember how unwillingly the Professor admitted the existence of any increase in formative power in that condition. This view, founded as it was on theoretic reasoning, and microscopic observation of the process, has since been advocated by other pathologists, including some of the German school, and it is interesting to observe how, upon emperical recommendations merely, the line of practice which it would suggest is rapidly coming into vogue.—*London Med. Times and Gaz.*

Statistics of the Lying-in Hospital at Berlin.—The number of accouchements from 1st January, 1836, till 31st December, 1841, was 4124, of which 1435 were *primiparæ*. The number of women delivered in the hospital was 1349, of whom 27 died. The number delivered in their own houses was 2775, of whom 33 died. The number of twin cases was 58. Of the 4182 children, 2141 were males, 1997 females, and of 44 the sex is not given. Of 4080 born at the full time, 262 were still-born; of these 56 were in the hospital, and 206 in the patients' houses. 102 were born before the full period. Presentations —of head 3846, face 26, brow 3, breech 98, footling 63, knee 2, 83 completely irregular. In 61 cases of premature labor the presentation could not be discovered. 3572 deliveries took place without assistance;

while in 552 the following assistance was required:—In 358 the forceps were applied; 101 extractions of the child; 2 irregular presentations rectified; 14 turning on the head, 1 on the breech, 75 on the feet; 7 forced deliveries, 7 premature deliveries; 6 cases of perforation; 8 of breaking down the head; 1 embryotomy; 2 cæsarian operations during the life of the mother, 1 after death; in 9 cases the cord, having prolapsed alongside of the head, was replaced; the placenta was artificially removed in 110 cases; in 3 the perineum was incised.

There were 67 cases of contraction of the pelvis from rickets. Of these, delivery was effected in 3 by the cæsarian section, in 1 by embryotomy, in 5 by perforation, in 8 by breaking down the head, in 5 by inducing premature labor, in 41 by the forceps, and in 2 by bringing down the feet.

Of the above 67, 9 mothers died; 2 after the cæsarian operation, 1 after embryotomy, 1 after perforation, 1 after breaking down the head, 2 after difficult delivery by the forceps, and 2 of hæmorrhage, following in one case, perforation, in the other, the application of the forceps.

In these cases 36 children were delivered dead, 32 (1 case of twins) were delivered alive.

Of the children born dead 5 were delivered by perforation, 8 by breaking down the head, 1 by embryotomy, 1 by artificial premature birth, 5 by turning and extraction by the feet, 1 by delivery by the feet, 14 by application of the forceps, and 1 by the cæsarian operation.—*Glasgow Med. Journ. from A. Lereboullet und M. Ruefz. Zeitschrift fur Geburtskunde.*

Upon the Destruction of the Puerperal Miasma in Lying-In Hospitals. By Dr. Busch.—The means employed by the author consist in heating the room to a high degree with dry air. This is effected by round iron stoves placed in the centre of the room, and connected with the chimney by metal tubes. The heat can be raised to 50.60° R. (about 155° F.) This must be kept up for two days, during which time all furniture and utensils are to remain in the room.

In March, 1851, puerperal fever invaded the Berlin Lying-in Hospital with remarkable severity; nearly all the patients suffered, and the Institution was closed for six weeks, during which time there was the most careful ventilation and purification. These means proved insufficient. Upon the re-opening of the hospital, all the new patients became attacked by the disease a few days after delivery. Then the author tried the plan here detailed in every room in the house. The effect was surprising; no fresh attack occurred during the whole summer. The same measures were adopted some time afterwards, and with the same success. —*London Med. Times, from N. Ztschr. fur Gebwitsk.*

SURGERY.

On a simple Method of ascertaining, without the use of the Catheter whether the Eustachian Tubes are pervious; with some observations on the Treatment of cases of Obstruction in these Tubes. By JOSEPH TOYNBEE, F. R. S.—The author pointed out the objections to the two ordinary modes of exploring the Eustachian tubes—viz. that the use of the catheter is liable to produce pain and discomfort; that, without experience, it is not easy to ascertain whether it be really in the tube; that the plan of attempting to distend the tympanum by a forcible expiration, while the mouth and nostrils are kept closed, is not always successful, from the fact that the young and nervous cannot be taught to perform the act, and that sometimes, when it is properly done, the guttural orifices of the tubes seem to be pressed together so as to preclude the air from entering. In a paper recently read before the Royal Society, the author endeavored to show that the guttural orifice of each Eustachian tube is generally closed, and that the air in the tympanum is not continuous with that in the cavity of the fauces, except during the momentary act of deglutition. In proof of this the following experiment was cited: If the mouth be shut, and the nostrils be held closed by the finger and thumb, and then the act of swallowing be performed, a sensation of fulness or pressure is experienced in each ear; and this sensation does not disappear upon the removal of the pressure from the nose, but it vanishes at once when the act of swallowing is again performed, while the mouth and nostrils are open. During the first act of swallowing, a small quantity of air was forced into the tympanitic cavities through the Eustachian tubes, and it therein remained until the second act of swallowing again opened the tubes and permitted the air to escape. The muscles whereby the Eustachian tubes are opened are the tensor and levator palati, which it is well known take origins from the cartilaginous walls of the tubes. As, during the act of swallowing with closed mouth and nostrils, air is forced through the Eustachian tubes into the tympanitic cavities, it is evident that the permeability of these tubes can be ascertained by making the patient swallow some saliva while the mouth and nose are shut. Nor need the surgeon depend upon the statement of the patient respecting the sensation of distension felt in the ears; for, by listening with the *otoscope*, should the Eustachian tubes be pervious, the air will be distinctly heard to enter the tympanitic cavities, and produce a gentle crackling sound. The author next proceeded to consider the treatment of cases of obstruction of the Eustachian tubes, especially in reference to the use of the catheter. It having been ascertained that these tubes are obstructed, is it desirable to attempt to open them by means of the catheter? Believing that obstruction in the Eustachian tubes generally depends upon a thickened state of the mucous membrane covering the guttural orifice, and that this state is always associated with a thickened condition of the faucial mucous membrane and of the mucous membrane of the tympanum, the author suggests—especially to those inexperienced in the

use of the catheter, not to attempt to pass this instrument—firstly, because, in such cases, the mucous membrane of the Eustachian tube is often so tumefied that no ordinary degree of pressure will force the air into the tympanum; and, secondly, because, should the surgeon succeed in transmitting a few air-bubbles, the relief obtained is only partial and endures for a very brief period, since the mucous membrane remains as thick as before, and the ill effects of the obstruction soon recur, from the air in the tympanum becoming of a different density from that without. The membrana tympani becomes more or less fixed. The treatment recommended is such as shall tend to reduce the thickened mucous membrane of the guttural orifices of the Eustachian tubes to a healthy size, so that their muscles may be able to open them. For this purpose, besides the use of general remedies, the solid nitrate of silver, or a strong solution of hydrochloric acid, may be applied to the mucous membrane of the fauces and to the apertures of the tubes, and gentle counter-irritation is to be kept up over the region of the fauces. By these measures, as a general rule, the mucous membrane can be reduced to its natural state, and the tubes become again opened by their muscles. Should this not take place, the Eustachian catheter may now and then be introduced, and air be gently blown through it. A modification in the shape of the Eustachian catheter is suggested—viz. that it should be oval instead of round, the advantages derived being, that it not only can be passed through the nose with less discomfort to the patient, but its presence in the Eustachian tube is much less disagreeable from the absence of the convex surfaces which, in the rounded catheter, press against the nearly flat surfaces of the tube. In conclusion, the author expresses his concurrence in the opinion of Harvey and Kramer, that enlarged tonsils are never the cause of obstruction in the Eustachian tubes, and that any benefit that may have followed their extirpation has arisen from the loss of blood consequent upon the operation.—*Lancet.*

Diffuse Hæmatocele of the Spermatic Cord.—Under the above title we are desirous of placing together the particulars of two very interesting cases, examples of an affection of very infrequent occurrence, and involving some important practical points.

Case I. *Kick on the Groin.—Large Extravasation of Blood into the structure of the cord.—Expectant treatment.—Slow absorption of the effused blood.* Under the care of Mr. Stanley.—John Davis, aged 30, a tall, powerful man, was admitted on Dec. 15, 1851, on account of a large swelling on the left side of his scrotum. The tumor was the size of two fists, pyriform in shape, its neck extending into the inguinal canal, very tense, with a smooth rounded outline, and equally solid feeling in all parts. It completely concealed the testicle and cord. The skin of the scrotum was distended, and of a purplish-red hue; it did not, however, adhere to the swelling, but might be pinched up from it. The man stated that he had on the previous day received a violent kick from a horse in the left groin, immediately after which swelling of the purse commenced, and, continuing to increase, attained, in the course of

six hours, its present size. The symptoms and history agreeing so well, Mr. Stanley felt no difficulty in diagnosing it as a case of extravasation of blood into the tissues of the spermatic cord, and he accordingly ordered the patient to be confined to the recumbent posture, and to keep a cold lotion constantly applied to the part. About ten days later, and before any apparent diminution in the size of the swelling had taken place, it was discovered that in the anterior and lower part there was a soft spot, and this, in the course of a few days, had become much more plainly evident. The sensation given to the finger was so like that of fluctuation, that several times the question of the propriety of making a puncture into it was mooted. Its performance was, however, deferred, and the swelling gradually diminishing in size from below upwards, it became evident in a short time that this false sense of fluctuation had been due, not to the presence of fluid but to that of the testis itself in a soft and healthy condition, held forwards by the solid mass of coagulated blood in which it was imbedded. The absorption of the blood proceeded but very slowly, and it was not until Feb. 1, that it was sufficiently accomplished to permit of the patient being discharged, and even at that time there remained considerable thickening of the cord, the other parts being left, however, in a perfectly normal state.

Case II. *Probable Injury to the Groin.—Large Extravasation of blood into the structures of the cord.—Treatment by mercury.—Slow absorption of the effused blood.* Under the care of Mr. Solly.—The following case, although similar to the preceding in its main features, was much complicated, as to diagnosis, by the history of an old standing hernia on the same side:

John Grady, a potman, aged 30, was admitted on Dec. 9, 1852. In the right side of his scrotum, the testicle and cord were concealed by an elongated swelling, the size of a fist, which extended from the most depending part of the scrotum into the inguinal canal. It was of smooth, tense and solid feeling, and the skin might easily be pinched up from it. No impulse was communicated to it by coughing. It was very difficult to arrive at a correct history of its appearance. On one occasion the patient confessed to having a few days before admission, been so drunk that he did not know what happened to him, but this he afterwards strenuously denied. He had seven years ago suffered from a hernia on the same side, which was easily returned, and for which he wore a truss two years, when it appeared to be cured, and never again troubled him. The present swelling had, he stated, formed slowly during several days, *commencing from above.* During the first day he suffered much from pain and vomiting, but these symptoms soon subsided. As no indications of strangulated hernia were now present, Mr. Solly did not deem it advisable to perform any exploratory operation. He ordered the man to be confined to bed, to have twelve leeches applied to the scrotum, and to take a pill containing two grains of calomel and half a grain of opium every night and morning. On the following day the leeches were repeated, with the effect of much diminishing the inflammation of the part. The pills having, after five days' employment, induced salivation,

were then discontinued. After the lapse of about a fortnight, there was found in the lowest part of the swelling just such a softened spot as we have noticed in the foregoing case, and suspicions were strongly excited of the existence of fluid. As absorption was going on very slowly, Mr. Solly ordered the whole affected part to be enveloped in lint spread with mercurial ointment, under the influence of which a slight ptyalism again resulted, and the swelling continued to diminish, from below upwards. It soon became evident that the soft part which had been felt, was due to the presence of the testis, as in the former instance.

The man left the hospital on Feb. 5, the lower half of the swelling having very nearly vanished, but the cord remaining extremely thick in the upper part and inguinal region.

There can, we think, be no hesitation as to the propriety of considering both the preceding cases as instances of the extravasation of blood within the fascia of the cord, consequent on the rupture either of the spermatic artery or of some of the veins composing the spermatic plexus.

The limitation of the swelling to one side of the scrotum, its rounded outline, pyriform shape, and non-attachment to the integument, all tend to prove that the blood was not free in the scrotal cellular tissue, but confined within some deeper membraneous tunic. The circumstance that the testicle was, in the first stage in each case, completely buried in the mass, is easily explicable by reference to the fact, that the infundibuliform fascia invests not only the cord and epidymis, but also the exterior of the tunica vaginalis: with the latter, however, its connexion is much more close than with other parts; and the small quantity of intervening cellular tissue accounts for the rapidity with which the effused blood (probably very small in quantity at first) became absorbed from that situation. Should extravasated blood, when in large quantity, as in the present cases, be evacuated by incisions? We have seen that its removal by absorption is a very tedious process, that it occupied in one case two months, and in the other six weeks (without being in either complete at the time of discharge;) yet taking all circumstances into account, we are convinced that it is one which should not be interfered with. All surgical authorities are opposed to the opening of collections of blood as a principle; and as it regards this situation in particular, there are on record some instructive cases. Through a mistaken diagnosis, *misled partly by the apparent fluctuation of the testicle below*, Mr. Freke was in one case induced to lay open the tumor, a large quantity of blood escaped, and the man ultimately did well. In a case which occurred to Mr. Pott, however, it was, after the incision, found impossible to discover the bleeding vessel, and castration was performed, on account of the alarming hemorrhage which ensued. Now, although we fully concur with the remark made in Mr. Curling's excellent work on the Testis, in allusion to the latter case, that "modern surgeons will not be inclined to admit that castration was the only remedy," yet the bare risk of such an expedient being necessitated, seems quite to overbalance the anticipated advantage in point of time.—*Lond. Med. Times & Gazette.*

Gastrotomy for Intestinal Obstruction. (Under the care of Mr. HANCOCK in Charing-cross Hospital.)—It occurs, unhappily but too often, that cases of unconquerable obstruction of the bowels are met with in our hospitals; and in casting a retrospective glance at our series of nosocomial reports, we find that we have had to record several cases of this kind. Another instance of intestinal obstruction has just taken place at Charing-cross Hospital, and we hasten to lay before our readers the particulars of the case.

Ann H——, aged 52, single, following the occupation of cook, and residing at Ham Common, was admitted on the 11th of February, 1853, under the care of Mr. Hancock. The patient had enjoyed very good health until ten months before admission, when she was suddenly seized with a severe pain in the bowels, which latter became much distended, and remained constipated for five days. She was attended by Dr. Hassall, and took various purgative medicines, without effect, up to the fifth day, when an enema was administered through a long tube (which the patient stated was passed some distance into the bowel), and the same evening a motion was passed. After this she appears to have improved, but has ever since been obliged to take aperients frequently to keep the bowels open, and has observed that the motions have been getting smaller—that is, long and thin, being at last about the size of her little finger.

About a month before admission, the patient began to suffer much from distension of the bowels, and considerable flatulence, which at times was so inconvenient that she was obliged to lie upon her bed until the flatus passed off. This state of things lasted for about a week, the bowels being at the same time rather constipated. Three weeks before the woman came to the hospital, she became so unwell that she was obliged to give up work and go to bed; and during the whole of that day and night she had violent vomiting and retching. An injection was administered during the day, and a motion passed. Enemata were given several times during the following week, with the same effect, the motions consisting of small scybala, the last one having been passed fifteen days before admission. At that time the motions, according to the patient's statement, had assumed the form of pills. Frequent vomiting took place up to the time of admission, when it ceased, and from this time it did not occur after food, but generally after taking any aperient medicine. The matter brought up was yellow, brown or greenish, and had a bitter, sourish taste, the smell not being particularly disagreeable.

The bowels had been much distended, and they were greatly so on admission. At times there was difficulty in passing urine, the latter coming away in small quantities. The patient did not suffer much pain except from borborygmi, which were relieved as soon as the flatus escaped, which at this period always occurred upwards, excepting after an injection, when a little passed downwards. No pain in any particular spot was complained of, excepting from a little distension about the umbilicus. The patient stated that the enemata did not appear to go beyond a certain point—a little above the crest of the left ilium; and

she thought that nearly a quart of injection has been retained at one time. She was bled the night before admission, and had calomel and opium. Mr. Hancock ordered two grains of calomel and a quarter of a grain of opium to be taken every second hour.

Second day: Pulse 108, rather small, but not particularly feeble; tongue furred, brown in the centre and red at the top and sides; surface warm; no perspiration; countenance not at all anxious. The spirits are pretty good, and the woman is tolerably cheerful. She does not sleep well; appetite very bad; abdomen tympanitic, supple and painless. There is rather a fæcal smell about the patient. Third day: pulse weak, 112; does not feel so well as yesterday, and is very low; is in great pain with flatus. She vomited a small quantity of yellow bitter matter this morning. Tongue more furred; skin cool and dry; urine passed freely.

A consultation was held at two o'clock, and it was decided to give an enema, and meet again at four o'clock. The enema was administered through the tube of a stomach pump, which was introduced in its whole length into the bowel, and about a quart of injection used, as no greater quantity could be employed. It returned, however, almost directly, untinged by fæcal matter, but accompanied by a small quantity of flatus. The temperature of the ward was raised as much as possible, and warmed sheets and towels provided, to cover the patient, should the operation be performed.

Fourth day, four P. M.: Nothing having passed from the bowels, and it being now the seventeenth day since anything had done so, the operation was decided upon, and chloroform administered. As there were not sufficient indications as to the situation of the obstruction, Mr. Hancock determined to commence by an incision in the median line from the umbilicus to the pubis; the intestines, distended by flatus, escaped through this opening, and were immediately covered by warmed towels, to preserve their temperature. The transverse colon being distended, the cause of obstruction was sought beyond, and found, without any difficulty, at the sigmoid flexure, in a portion of the bowel about an inch in length, constricted by a band about half an inch wide, but of so long standing as to have thickened the intestine and obliterated its canal. This band was divided, but the gut was so changed in structure and compressed, that it was evident the only chance of recovery consisted in opening the colon, and forming an artificial anus above the obstructed point. A transverse incision was therefore carried through the abdominal parietes, from below the umbilicus to the crest of the ilium on the left side, and an opening being made in the colon about an inch in length, the cut edges of the gut were attached by sutures to the margins of the integumentary wound; after which the intestines were returned into the cavity of the abdomen, the wound brought together by sutures, and the patient sent to her bed.

The patient bore the operation very well, her pulse remaining pretty good throughout, and being 126 at its termination. Stimulants were administered two or three times during the operation, which lasted forty

minutes from first to last; and a little brandy, with fifteen minims of laudanum, immediately after. Twelve P. M.: Pulse stronger, 126; surface of body cold; a large quantity of fæcal matter has passed through the opening; the patient complains greatly of pain in the part incised. Mr. Hancock saw her at nine o'clock, and as she then appeared extremely low, ordered her laudanum and ammonia, in camphor mixture, every four hours. The pain, which was most severe, now became less intense.

First day after the operation, eight A. M.: Mr. Hancock found the patient better; her pulse was fuller; skin warm, and covered with warm perspiration; bowels have acted very copiously during the night through the artificial opening, and the vomiting has ceased; pain has diminished, and the woman has had some sleep. Ten A. M.: not quite so well; pulse more feeble; in other respects much the same. Three P. M.: Much worse; is in great pain; countenance anxious; very restless; upper and lower extremities cold; pupils contracted; tongue dry and parched; pulse cannot be counted; can bear pressure without much increase of suffering. The patient died at a quarter past three o'clock.

No regular post-mortem examination took place, but it was easily ascertained that the obstruction lay principally in the locality which has been mentioned above.—*Lond. Medical Circular.*

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NOTICE TO CORRESPONDENTS.

Communications and Books for notice should be addressed to the Editors, care of Messrs. Lindsay & Blakiston.

Letters, &c., connected with the *business affairs* of the Journal should be addressed to the Publishers.

Papers for publication must be received *before* the 20th of the month, or they cannot appear in the forthcoming number.

The following Journals have been received in exchange:

American Journal of Medical Science. Jan., 1853.
Western Lancet. December.
New Orleans Monthly Medical Register.
Southern Journal of the Medical and Physical Sciences.
New Orleans Medical and Surgical Journal.
Medical Recorder.
Western Medico-Chirurgical Journal.
Union Journal of Medicine.
Medical News. Philadelphia.
Buffalo Journal.
New York Medical Gazette.
The Boston Medical and Surgical Journal. (Weekly.)
Stethoscope and Virginia Medical Gazette.
New Jersey Medical and Surgical Reporter.
Transylvania Medical Journal.
Southern Medical and Surgical Journal.
New Hampshire Journal of Medicine.
The London Lancet. (Weekly, London.)
The Medical Times and Gazette. (Weekly, London.)
Dublin Medical Press.
Dublin Quarterly Journal.
British and Foreign Medico-Chirurgical Review.
Journal of Psychological Medicine.
London Journal of Medicine.
Edinburgh Medical and Surgical Journal.
Journal of Psychological Medicine.
London Pharmaceutical Journal.
Edinburgh Monthly Journal.
Journal of Pharmacy.
North Western Medical Intelligencer.
American Journal of Insanity.

BOOKS RECEIVED.

Clinical Phrase Book, in English and German. From Lindsay & Blakiston.
Löwig's Principles of Organic Chemistry. From Mr. A. Hart.
Warrington's Obstetric Catechism. From Barrington & Haswell.

The foreign correspondents of the Examiner will please direct their Exchanges and other communications to the care of Mr. Thos. Delf, No. 21 Paternoster Row, London, or Mr. H. Bossange, 21 Bis, Quai Voltaire, Paris.

"*Les symptômes de l'épilepsi*
tellement au dessus de tou
causes de cette maladie sont

"*I think no disease is*
since the application
System to its Pathol

THE PHYSIOLOGY OF EPILEPSY, AND OF PAROXYSMAL APOPLEXY, PARALYSI

BY MARSHALL HALL, M. D., F. R. S., ETC.

I. *General View of Epilepsia, Apoplexy, Paralysis, and Mani*

1. Epilepsy,
2. Apoplexy,
3. Paralysis,
4. Mania, which may be but different phases of one and the same disease,—may each

CLASS I. The Paroxysmal—
1. Of Inorganic Origin;
2. Of Recurrent Paroxysmal Form;
3. Of short Duration, terminating in perfect recovery, or
4. Fatal, without post-mortem appearances, or
5. With such as are Effects only.

CLASS II. T
1. O
2. O

II. *Inorganic Epilepsy is*—

1. Spinal; with	2. Cerebral and Spinal; with	3. Spinal; with	4. Cerebral; with
Trachelismus;	1. Vertigo, &c. 2. Convulsio	Spasmodic Laryngismus;	Coma, &c. Paralytic Laryngismus;

THE

MEDICAL EXAMINER,

AND

RECORD OF MEDICAL SCIENCE.

NEW SERIES.—NO. CII.—JUNE, 1853.

ORIGINAL COMMUNICATIONS.

A Case of Poisoning with Strychnine relieved by Chloroform.

By Geo. L. Upshur, A. M., M. D., Surgeon to U. S. Marine Hospital, Norfolk, Member of Am. Med. Association, &c., &c.

On the 30th of March, 1853, I was called to see the child of Mr. F., sick with chronic diarrhœa. It was born on the 2d of January, and consequently was not quite three months old. When less than two weeks old, its bowels became disordered, and I had frequently prescribed medicine for it from the description given of the case by the father. It took first one simple astringent and then another, with now and then an alterative dose of calomel, but nothing seemed to exercise any permanent control over the affection. The child thus became, in a short time, much emaciated and enfeebled, and I was requested to visit it on 30th of March. Found it feverish, thirsty and restless, with a movement of the bowels every hour or two, and scarcely any digestive power left. The milk was passed from the bowels in the same state as it left the stomach, and there were frequent nausea and vomiting. I ordered one of the following powders three times a day:

℞. Ext. Krameriæ gr. xv.
Pulv. Dover. gr. xii.
Pulv. Rhei gr. vj.
Strychniæ gr. 1-5th.
M. Chart. 12.

In the course of two or three days there was a manifest improvement in the condition of the patient; the nausea ceased, the dejections became less frequent and more natural, and the mother's milk seemed to agree as it never had done before. The powders were continued until 24 had been taken, when they were discontinued, and I left the child fairly convalescent.

On the 14th of April the father came to my office to say that the child's bowels had again become disordered, but there was no fever, and it was very sprightly. I ordered a *tea*-spoonful of infusion of rhubarb with six drops of paregoric to be given three times a day. On the 20th there had been no improvement, and I was requested to visit it. Finding it in nearly the same condition that it was on the 30th of March, I determined to give the strychnia again, and in larger doses. The following is the prescription:

℞. Pulv. Dover. gr. xv.
Cretæ Prep. gr. xxx.
Pulv. Rhei gr. viii.
Strychniæ gr. ½.
M. Chart. 15. S. A powder three times a day.

The child took the first dose at one o'clock; at two the mother discovered that it was becoming very restless—frequently starting, as it were involuntarily, and, now and then, becoming quite rigid. These symptoms gradually increased in violence until 4 o'clock, when I was sent for, the messenger informing me that the child had strong convulsions. Arriving in a few minutes, I found the patient lying in the lap with almost every muscle in the body acting spasmodically. The spasms were tetanic, with very short intervals between the paroxysms. There was no heat about the head, nor, indeed, any feverish action, and the child's intellect was perfectly clear, as was evinced by the cry of suffering which was uttered between the paroxysms, and the earnest look for relief cast upon every person around it. The spasms resembled more nearly than anything else a violent shuddering,

or agitation of the whole frame—the hands being tightly clenched, the body bent backwards, and the limbs immoveably rigid.

I immediately ordered a mustard plaster to be applied down the spine, and, while I went for some chloroform, directed equal parts of brandy and water to be freely given. I was absent half an hour, and on my return found the convulsions more violent, if possible, than ever. Fifteen drops of chloroform were sprinkled on a towel, folded in the shape of a funnel, and applied over the patient's mouth and nose. In four minutes she was fully under the influence of the remedy, and snored aloud. The towel was removed, and as soon as consciousness began to return the spasms also began to re-appear, when it was again applied. The child was thus kept fully under the influence of the chloroform for *four* hours, at the end of which time, there being no tendency to a recurrence of the convulsive movement, the remedy was discontinued, the entire quantity inhaled being f℥ss.

For two days afterwards the child had frequent bloody, slimy stools, accompanied by a good deal of pain and fever; but these symptoms yielded readily to a blister on the abdomen, and nitrate of silver enemata, with laudanum. The child is now in better health than she has been since her birth, being four months old on the 2d inst.

Remarks.—This case presents some exceedingly interesting points. The tender age of the patient, the very small dose of strychnia—only 1-30th of a grain—the length of time that the chloroform impression was maintained, and the perfectly satisfactory result of the treatment, are all matters of great interest to the medical man. At first I was disposed to doubt the possibility of so minute a dose of strychnia producing such violent symptoms, and began to think that some mistake had been committed by the apothecary; but, upon inquiry, I learned that the prescription had been put up by one of our most careful apothecaries, whose attention was called at the moment to the necessity of being careful in weighing the strychnia, by an older member of the firm. I do not think it probable that more than half a grain was put in the fifteen powders, so that the child could not have taken more than a *thirtieth* of a grain. When it is remembered, that one *twentieth* of a grain had, but a few days before,

been given every day for eight days, without any unpleasant effects, it seems almost incredible that a thirtieth of a grain should produce such alarming symptoms.

Is it possible, that the action of strychnia, like that of digitalis, is *cumulative?* If so, then the convulsions in this case *may have* resulted from the whole amount of the poison which the child had taken from the 30th of March to the 14th of April, instead of from the simple dose of one thirtieth of a grain. But the best writers on Materia Medica do not consider strychnia to be cumulative in its action—certainly not to the same extent as digitalis—for Taylor, in his *work on Poisons*, says, "when the dose is gradually raised, the system may become *habituated* to the poison, so as to resist the effects of a very large dose;" and *Pereira* has seen the dose *gradually increased*, until one grain and a half was taken three times a day, without dangerous consequences. *Boyle*, however, remarks, "that some cases show a tendency to its becoming cumulative in its action."

I am not disposed to believe, however, that the symptoms in this case were due to the cumulative action of the poison. The medicine was entirely discontinued on the 6th of April, and was not resumed until the 14th, eight days after. The symptoms, too, followed the administration of the powder on the 14th too quickly, and were too marked in their character, to be attributed to any other cause than the powder; so, that after a careful review of all the attending circumstances, and without a desire to give undue weight to any one of them, I am satisfied that the child was poisoned by only the thirtieth of a grain of strychnia, and that the dose would have been fatal but for the chloroform.

This is probably the smallest dose of strychnia that ever produced symptoms which threatened to destroy life. Taylor quotes from the *Brit. Amer. Journ.* for Aug., 1847, the case of Dr. Warner, who was killed in *fourteen minutes* by taking *half a grain;* and Dr. Watson reported a case, in the *Med. Gaz.*, for 1845, of a girl, æt. 13, who died from taking *three quarters* of a grain; but in both these cases the dose was larger, in proportion to the age of the patient, than in the case herein reported.

The magic effect of the chloroform deserves some notice. Its impression was maintained for four hours with the happiest results. In less than five minutes the child became perfectly com-

posed, and soon was in a profound sleep. At every recurrence of the convulsive movement, two or three inspirations were sufficient to produce perfect composure, until the force of the poison had expended itself, when the chloroform was discontinued, and the patient recovered without further serious symptoms.

In conclusion, I may be permitted to say, that I report this case only for what it is worth. As I have said elsewhere in the pages of this Journal, it is very unphilosophical to deduce any general principle in therapeutics from a solitary observation, and, therefore, in giving this case to the public I do not intend to commit the error which is so often committed—that of seeking to establish a permanent law from the treatment of a single case. I merely give the facts, viz: that I administered the thirtieth of a grain of strychnia to a child three months and twelve days old; that, in a short time, the child had all the serious symptoms that are attributed to a poisonous dose of strychnia, and which, to all appearance, would have destroyed life had they continued; and that it was kept under the influence of chloroform for four hours, and recovered without having any return of spasm or other serious symptom. I *believe* the recovery was due to the chloroform.

Norfolk, Va., May 7th, 1853.

Medico-Topographical Remarks on the County of Fauquier, Va. By G. R. B. Horner, M. D., Surgeon U. S. Naval Station, Philadelphia.

This county—one of the largest in the State—lies forty miles westward of the District of Columbia, and extends fifty miles from North to South. On the East it is bounded by Broad Run, one of the tributary streams of the Potomac; and on the Southwest by the Hedgmon, the northern branch of the Rappahannock. The lower half of the county is gently undulated and level, the upper portion generally hilly and mountainous. The soil of the former is very sandy in parts,—alluvial and clayey in others. Hence its marshyness and unwholesomeness during wet weather. The soil of the latter, or northern portion, is generally loamy, lighter, and more productive; but there are exceptions, as the part termed Marshall's manor, in the western

portion of the county, which is glady, sandy, and barren to a great extent. Other exceptions might be made; but the soil of the northern portion may be justly called fertile, both naturally and artificially. Grain of every kind, clover, hay, various fruits, and vegetables abound; farms are in fine order, and sell at high rates. The most valuable mineral production is gold, which is found in the white flint or quartz rocks, about the central part of the county, in small quantities, but more abundantly in the mines at the southern part. Slate, black rock, limestone, sandstone of fine quality,—for paving and building,—are found plentifully in quarries here and there; but limestone chiefly north of the Rappahannock mountain. In the sandy parts the pine flourishes; in the flinty the chestnut; in other parts grow the red, white and black oak, the walnut, white poplar, cornus florida, hickory, and other forest trees. Interspersed are the haw, quince, chinquepin, cedar, locust, cherry, apple, pear, peach, persimmon; and many medicinal plants, as the dewberry, serpentaria, stramonium, taraxicum, night-shades, sage, horehound, green and spear-mint, pennyroyal, hop, wild turnip, chenopodium anthelminticum and sassafras. Some of these plants are due to cultivation, others grow spontaneously and luxuriously, when located in suitable soils—as the green mint along branches; the pennyroyal or mentham pelegium on the road sides, and hills uncovered by forests. In neglected fields the dew and blackberry and luscious strawberry abound, until the young pines shoot up, spontaneously, and ultimately overwhelm them. This occurs with surprising rapidity; and in a few years once barren land is seen shaded by a dense, high waving forest of these trees. In a short time longer, they become fit for fences and buildings, and always afford shelter to wild and domestic animals during winter, and the severe storms of rain, thunder and lightning, so common in summer. Cattle are the most abundant and profitable of the latter. Vast numbers are driven, when half grown, from the north-western part of the State, grazed for a year, and then sold at a large advance,—usually at double price,—from the richness of the pastures, and the abundance of fine water found in every valley.

Hares, opossums, raccoons, foxes, squirrels, larks, robins, woodcock, snipe, sparrows, blackbirds of several species, part

ridges, and wild turkeys, are the principal game. Wild pigeons occasionally appear, and are killed in great numbers. Hawks, and especially crows, are the pests of the land, and the turkey-buzzard, in mild weather, is ever seen soaring aloft in quest of his epicurean fare.

From the proximity of the Blue Ridge, which bounds the northern and north-western parts of the county, and from the height of the other mountains, as well as other causes, the climate is cool and variable,—subject to great changes in temperature, and in warm weather to occasional tornadoes of great violence, which always come from towards the mountains. Within a few years, several of the former have occurred, and blown down dwellings and other houses, including a large brick church in Warrenton, the county town—a handsome one, situated on an elegant hill in the centre of Fauquier, 650 feet above tide-water, and overlooking the whole of the lower part of the county. Hail-storms sometimes happen; and one which took place about thirty-five years ago was so violent and destructive to vegetation and buildings, that it cannot be forgotten. It then fell in lumps so large as to shiver every glass struck, to kill grass, and leave its marks not only on it, but on every housetop.

From this vicissitude of climate, pulmonary affections are very common; pleurisy, pneumonia, and phthisis are familiar causes of death; and scarlet-fever, in winter, has been still more fatal among children. In 1815 the typhus pneumonia prevailed extensively in the low, damp country south and east of the town, and carried off many victims. Rheumatism abounds among the slaves, and in summer miasmatic fevers, remittent and intermittent, occur in some parts, near mill-dams and large streams; but of late years the bilious fever has been rare. Indeed, from Dr. Chilton, one of the chief physicians in the town, I understand he has hardly ever met with it, and that another physician, of much greater experience, informed him he had not had a case for ten years. Notwithstanding the climate is faulty, the inhabitants of Fauquier are distinguished for health, activity, energy, and enterprise, and attain as great longevity as any in the State. Those who become invalids have access to that delightful and commodious watering-place, called *Lee's*, or the Warrenton Springs. They are on the left bank of the Rappahannock, six

miles southwest of the town, and accessible by a well-graded turnpike extending from the town to them. The railroad from Alexandria to it renders them very convenient to Eastern invalids; and as the water is sulphurous, magnesian, and palatable, it is found well adapted to those affected with digestive disorders, and particularly dyspepsia. But of late, an alum spring in the adjoining county of Culpepper has become a rival; and I found a lady, who had long suffered from this complaint, using it largely, having procured a supply at her residence in Warrenton. But the most important case occupying the medical faculty was one of medical jurisprudence. The facts were these, so far as I could learn by attending the trial and from report:—Last fall, two negro men kindled a fire on the eastern branch of the above river, near the springs, and engaged at night in fishing. While there, two overseers—Hunter and Curtis—forming a patrol, and intoxicated, it was asserted, discerned the fire and negroes, and hailed them. In answer, as it was dark, and they could not see distinctly, they inquired whether the former were white or black. This enraged the patrol, and, rushing up, they assaulted the negroes: one fled and saved himself; the other was seized, beaten, thrown down, and choked to death, without his assailants being fully aware of it, as they dragged him to an adjacent house and left him. Anxious concerning him, they returned after a while, and finding him dead, to conceal their guilt, dragged him along a branch, and threw him into the river where it was not over a foot deep. He was there found; an inquest of physicians and others was held, and his body was dissected. From the marks of violence about it, the bruises on the face, engorgement of the lungs, and bloated features, they were satisfied he was strangled. The overseers were apprehended, made some confessions, retracted them, and were tried in April before Judge Tyler of the Superior Court. The counsel for the defence cross-questioned the witnesses, puzzled the doctors no little, and endeavored to prove that the man was either drowned or unintentionally killed; and to sustain him in the first position, urged the fact of some water having been found in the lungs. After hearing the arguments on both sides, the jury—believed to have been packed from persons of a like kind to the criminals—retired, and in a short time returned into

court, and rendered a verdict of death "from involuntary homicide." When the learned judge heard this, he became enraged, reprimanded both jury and criminals, and told the first he did not believe any other persons in the courthouse besides themselves believed the deceased owed his death to that cause. He then imposed on the prisoners a heavy fine—with the price of the negro, it was said, amounting to $2000—and sentenced them to three months' longer imprisonment. To end the chapter, it may be well to state that incensed justice or some malignant wretch, on the first day of this month, applied the torch to the courthouse steeple during the night; and that handsome edifice, so many years the pride and admiration of the country, crumbled into ruins, while its antique bell, tumbling from its dizzy height, gave its last knell and sounding its own funeral dirge, sank into the fiery gulf beneath. It was there soon irrecoverably melted. At this sad spectacle every beholder mourned; and among the sorrowful crowd looking on—as the Jews of old in sight of their burning temple—was an old negro man, leaning against the brick enclosure of the courthouse, and sobbing bitterly, that one of his race had so recently been allowed to be murdered, and to remain unavenged. Who was the incendiary is still a conjecture. Many have been suspected—whites and blacks, slaves and freemen, have been accused of burning this and the many other houses burnt in Warrenton within the last two years. A member of the bar has been accused of it, and acquitted. From the burning of the courthouse so soon after the above trial and unsatisfactory sentence of the overseers, reason is entertained of that having been caused by the negro who escaped from them, or some other one offended at their being so slightly punished; but the author of this fire is still unknown, and we shall have to ascribe it to that very common and convenient origin of mischief in modern times, spontaneous combustion, which is supposed to have caused the late destruction of such a great amount of public property at the New York navy-yard. To the same cause we might plausibly ascribe all the fires mentioned before, had they not occurred in the cool of the night, instead of the heat of the day, when there is so much greater tendency to that phenomenon.

Singular Case of Foreign Substances in the Intestinal Canal.
By D. HAYES AGNEW, M. D., Philadelphia.

The following case I am induced to report from its very singular character:—On examining the body of an individual who, I believe, labored under some mental alienation during life, my attention was attracted to an adhesion between the parietal and visceral layer of peritoneum over the cœcum, upon the separation of which a small opening was perceived through the walls of the intestine, disclosing a dark-looking substance, which, upon examination, proved to be a large mass of straw, little less than an ordinary sized fist, and firmly impacted in all the space below the ileo-cœcal valve. Noticing the transverse colon very much distended, an incision was made into its cavity, where were found a pair of suspenders, three rollers, and a quantity of thread, interwoven with one another. The webbing, which evidently was his suspenders, exceeded one and a quarter inches in breadth, and must be several feet in length, inasmuch as it extended through the ascending, transverse, and a portion of the descending colon, and doubled in several places upon itself. The rollers were of ordinary muslin, over one inch in width and the same in diameter, but which must have been of much greater size when swallowed, as they had, in their progress along the intestines, become unrolled, leaving long ends which were encased within layers of fæculent matter. The peritonitis, which no doubt had been the principal cause of death, was not, however, produced by the escape of any intestinal matter into the serous cavity, no such discharge having occurred. The opening into the cœcum only presented itself after the reflected layer of the peritoneum was separated therefrom. Had life been prolonged, it is highly probable that the ulceration would have extended through the walls of the abdomen, and the cœcal contents passed out by this artificial route.

BIBLIOGRAPHICAL NOTICES.

Principles of Organic and Physiological Chemistry. By CARL LÖWIG, M. D.; Ph. D., Ordinary Professor of Chemistry at the University of Zurich, &c. Translated by Daniel Breed, M. D., of the U. S. Patent Office. Philada. A. Hart: 1853. pp. 481, octavo.

We confess to a feeling of satisfaction in looking over this book, arising chiefly from gratification from having so rich a vein of German chemical literature opened to our free access, yet not a little, also, from the American origin of the translation. Dr. Breed, whilst a student with Löwig, conceived the idea of translating this work of his preceptor, and executed a large portion of it whilst enjoying personal intercourse with the author. The exceeding fullness of the terminology and the peculiar views of the author, as exhibited in his endeavor to substitute rational for empirical formulæ, has rendered the task one of great difficulty; yet we believe it has been executed in a manner to do justice to Dr. Löwig, and great credit to the translator. Further, the book itself is well "gotten up" by the publisher, and is quite as free from errors of the press as such complex typography is usually found to be. Let us now look at the volume as Dr. Breed has unfolded it to us, and see if within the space allowed to this notice we can convey an idea of its character.

Dr. Löwig is the author of "Chemie der Organischen Verbindungen," (an octavo of 3000 pages,) which is now passing through its third edition. The present work may be looked upon as an introduction to that great work, and is intended to explain more fully the principles adopted in it, especially those which, originated with the author. For this reason many of the details common in works on organic chemistry, as the names of discoverers, manufacturing processes, etc., are omitted. The "Principles" is in two parts; the first is devoted to explaining the constitution and formation of organic compounds in general, and the constitution of organic radicals in particular, and is an essay on the philosophy of organic chemistry, of the highest order. The immense accumulation of observations on organic substances

and products renders it absolutely necessary to adopt wider and more simple generalizations than have yet been offered, by which the phenomena of organic combinations may be classed in a more harmonious relation, and the laws which govern and control their intricate affinities developed, so as to impress the beautiful simplicity of a natural arrangement on the vast heterogeneous mass, and marshal it into order. The work of our author is an attempt in this direction. He is a thorough advocate of the Theory of Radicals; not as originally broached by Berzelius, but much modified, so as to harmonize many facts that are prominent in the views of Dumas, Laurent, and Gerhardt, as exhibited in the doctrine of Substitution, and the Theories of Types and Nuclei. There are two ways of viewing the formula or symbolical representation of the composition of an organic compound. In the first, the number of atoms of each element is simply indicated; thus $C_8 H_8 O_4$ represents the elementary constituents of acetic ether, and is its *empirical* formula, or just what would be obtained by an analysis, supposing it presented to a chemist for the first time, and before any attempt at discovering its nature was made. In the second, the atoms are grouped so as to exhibit the proximate constitution of the substance, thus:—$C_4 H_5 O + C_4 H_3 O_3$ indicates that the substance is a compound of ether and acetic acid; whilst $C_4 H_5, O + C_4 H_3, O_3$ explains further that ether is the oxide of the radical ethyl, and that acetic acid is the oxide of the radical acetyl, and is its *rational* formula.

A radical is that part of a compound which preserves its identity when the other part or parts are removed and replaced by other elements or substances: For instance, nitrogen, in the five compounds which it forms with 1, 2, 3, 4 and 5 equivalents of oxygen, is a *simple radical*, whilst the substance $C_4 H_5$ in ether is called a *compound* (or organic) *radical*, because the atom of oxygen, which by union constitutes it ether, may be replaced by chlorine, bromine or sulphur, without destroying the *essential* affinity of its atoms. Such radicals our author calls *primary* organic radicals. Now, a second series of radicals are obtained from these by the substitution, partially or wholly, of other elements for the hydrogen. Thus—acetyl= $C_4 H_3$ is under favorable circumstances acted on by chlorine, which displaces its hydrogen, forming three equivalents of hydro-chloric acid, and re-

places the hydrogen with equivalent atoms of chlorine, so as to produce $C_4\ Cl_3$= chloracetyl. Now, in this reaction the *specific atomic affinity* of the acetyl remains undisturbed, whilst the matter itself has been changed, and the resulting chloracetyl acts the part of a radical, forming chlor-acetic acid with oxygen, and a chloride with chlorine, just as acetyl does, yet possessing different properties. It is therefore called by our author a *derived* radical. In the instance mentioned the substitution has been complete; in other cases it is only partial, as where valeryl= $C_{10}\ H_9$ becomes by partial displacement of hydrogen atoms H_7 H_5 $C_{10}\ Cl_2$ and further, $C_{10}\ Cl_4$. Owing to this *law of substitution* the derivative compounds are exceedingly numerous, yet such a mutual relation exists among the substances traceable to a common primary radical, that, as an entire group, they constitute a *natural family*, just as the botanical affinities of plants constitute a family in the natural system of Jussieu.

Radicals may be considered as the elements in inorganic compounds, and may be called compound atoms acting as a whole. It frequently happens that two or even more of these compound atoms unite to form a radical, in which case the combining capacity of the compound is generally determined by but one of them. Such are called *paired radicals* and the indifferent body the *pairling*. Thus, $C_6\ H_3$=$(C_4\ H_2)\frown C_2H$, in which $C_4\ H_2$ is the passive molecule and C_2H the active one, the former being enclosed in brackets and connected with the other by a hyphen. If, as occasionally happens, two active radicals unite, a *double radical* results, as in succinic acid, wherein $C_8\ H_4\ O_6$=$(C_6\ H_3)\ O_3\frown(C_2H)\ O_3$ the resulting acid being bi-basic and is a true double acid.

Radicals are sometimes *isomeric*, that is, have the same elementary composition, yet, in combining with the same substances, yield compounds varying in properties. Thus, $C_{14}\ H_6$ represents the composition of the radicals of benzoic and salicylous acids, yet, while in the first the formula represents a simple radical, the second is a paired radical consisting of $(C_4\ H_2)\frown C_{10}\ H_4$.

Other radicals are *polymeric* when their relative proportion of atoms is the same, but their absolute proportion different, as in the hydro-carbon volatile oils; and in yet other compounds, though the absolute and relative number of the atoms is the

same, they have a different proximate arrangement and are called *metameric*. Thus, hydrated acetic acid and formate of methyl are both composed of $C_4 H_4 O_4$, yet the formula of the former is $HO, (C_4 H_3) O_3$, whilst that of the latter is $(C_2 H_3) O, (C_2 H) O_3$.

The Chapter of Dr. Löwig on the formation of organic compounds is replete with original observations and possessed of unusual interest. It is the highest aim of the Organic Chemist to unfold the ultimate constitution of bodies, and then trace back their constituents to their simplest forms. The various affinities, each in its sphere of action among definite atoms or groups of atoms, which are the uniting influence that impresses proximate character on the endless variety of chemical products, constitute a study of the deepest interest. The primitive affinities are the strongest and most permanent, and give rise to organic substances with but few atoms, whilst under the various degrees of secondary affinity the more complex and less permanent compounds result. The formation of organic compounds results,

1st, From the decomposition of inorganic substances, generally under the influence of the vitality of plants with the cooperation of light, but in some instances by artificial means; and,

2d, By the decomposition of other organic compounds by means of manifold influences.

The formation of organic compounds in the vegetable organism from carbonic acid and ammonia is the part of vegetable physiology most interesting to the chemist. The cases where organic bodies are derived from inorganic materials by strictly chemical processes, are few, and not well marked. The chief source of these products are from the decomposition of other organic bodies under the influence of electricity, of heat, of fermentation and putrefaction, of the vital functions in the animal organism on the one hand, and by the influence of other chemical bodies on the other. Our space does not admit, else we would gladly give our readers the whole of this chapter.

The third chapter, on the Constitution of Organic Radicals, embraces many of the author's peculiar views. The following extract will show how he explains the constitution of the hydrocarbon radicals:

"By far the greater number of organic compounds are to be

traced back to radicals which consist of carbon and hydrogen, and were called above *Hydro-carbyls.* By an accurate observation and comparison of these in every aspect which they present, it is found that they belong to different groups, and that those of each group mostly form an ascending series, in which each successive member contains the same number of carbon and hydrogen atoms as the preceding. But whilst the radicals of one group, in their combining proportions, are allied to hydrogen and the positive metals, those of another agree in this relation with the negative.

In all the radicals of the hydro-carbyls may be distinguished, 1. *The Active Element or Molecule;* and 2. *The Ascending Passive Component,* by which individual members of a group are formed. *In all Organic Radicals which have a positive character,* the active part *is H; in the Negative C_2H. The ascending passive member of the Component is always $C_2 H_2$.* All radicals which appear as simple combinations of the components $C_2 H_2$, with the active H, or C_2H, form the class of the *Hydroisocarbyls,* but if between the ascending $C_2 H_2$ and the active H or C_2H another molecule of carbon enters$=C_2$, C_4, C_6, C_8, which may be considered as a *Nucleus,* we thus obtain the class of *Hydropolycarbyls.*"

Hydroisocarbyls are first treated of in the special part of the work, the first group being the Methyl group Component $C_2 H_2$ and active element H. The known members of this group are

1st member		Methyl	$C_2 H_2$, $H = C_2 H_3$
2d	"	Ethyl	$2\,C_2 H_2$, $H = C_4 H_5$
4th	"	Valyl	$4\,C_2 H_2$, $H = C_8 H_9$
5th	"	Amyl	$5\,C_2 H_2$, $H = C_{10} H_{11}$
16th	"	Cethyl	$16\,C_2 H_2$, $H = C_{32} H_{33}$
24th	"	Cerossyl	$24\,C_2 H_2$, $H = C_{48} H_{49}$
27th	"	Cerotyl	$27\,C_2 H_2$, $H = C_{54} H_{55}$
30th	"	Melissyl	$30\,C_2 H_2$, $H = C_{60} H_{61}$

The radicals of this group all behave towards chlorine, bromine, iodine, sulphur, selenium, etc., as hydrogen does.

The second is the formyl group, the Component being $C_2 H_2$; the active molecule formyl$=C_2H$. This is the most numerous at present known. The following members have been discovered:

Member 1	Acetyl	$C_2 H_2$, $C_2H=C_4 H_3$
" 2	Propionyl	$2 C_2 H_2$, $C_2H=C_6 H_5$
" 3	Butyryl	$3 C_2 H_2$, $C_2H=C_8 H_7$
" 4	Valeryl	$4 C_2 H_2$, $C_2H=C_{10} H_9$
" 5	Capronyl	$5 C_2 H_2$, $C_2H=C_{12} H_{11}$
" 6	Oenanthyl	$6 C_2 H_2$, $C_2H=C_{14} H_{13}$
" 7	Capryl	$7 C_2 H_2$, $C_2H=C_{16} H_{15}$
" 8	Pelargonyl	$8 C_2 H_2$, $C_2H=C_{18} H_{17}$
" 9	Caprylyl	$9 C_2 H_2$, $C_2H=C_{20} H_{19}$
" 10	Cocyl	$10 C_2 H_2$, $C_2H=C_{22} H_{21}$
" 11	Laurosteryl	$11 C_2 H_2$, $C_2H=C_{24} H_{23}$
" 13	Myristicyl	$13 C_2 H_2$, $C_2H=C_{28} H_{27}$
" 14	Benyl	$14 C_2 H_2$, $C_2H=C_{30} H_{29}$
" 15	Palmityl	$15 C_2 H_2$, $C_2H=C_{32} H_{31}$
" 16	Margaryl	$16 C_2 H_2$, $C_2H=C_{34} H_{33}$
" 17	Stearophanyl	$17 C_2 H_2$, $C_2H=C_{36} H_{35}$
" 21	Behanyl	$21 C_2 H_2$, $C_2H=C_{44} H_{43}$
" 23	Cerossyl	$23 C_2 H_2$, $C_2H=C_{48} H_{47}$
" 26	Cerotyl	$26 C_2 H_2$, $C_2H=C_{54} H_{53}$
" 29	Melissinyl	$29 C_2 H_2$, $C_2H=C_{60} H_{59}$

The radicals of this group all possess the capability of forming acids with 3 atoms of oxygen.

These examples will suffice to explain Dr. Löwig's views of the radicals of the first division. The Hydropolycarbyls are an extremely numerous class, and are divided into five groups. Four of these are based on the proportion of the carbon nucleus, and the fifth includes volatile oils, camphors and resins.

The second division, or CARBYLS, includes every radical which consists of two or more atoms of carbon, of which oxatyl= C_2, the radical of oxalic acid, is a type, and embrace nearly all the ordinary vegetable acids, like the oxalic, citric, malic, etc.

The third division, or AZOCARBYLS, includes Cyanogen and its compounds, Paraban, Fulminan and Mellan.

The fourth division, HYDROAZOCARBYLS, includes the *uren* compounds and the organic *alkalids*, of which Glycocoll and Kreatin are members.

The fifth division, or HYDRILS, embraces the organic salt bases or alkaloids, including the nitrogen bases, the paired nitrogen

bases, and those containing the metals, as Kakodyl, Stibmethyl, Bismæthyl, etc.

The sixth division includes "organic combinations of a higher order."

1st. *Non-nitrogenous compounds*, as the tannic and lichen acids, coloring matters, bitter principles, common vegetable and animal matters, as celulose, starch, gum, sugar and pectin.

2d. *Nitrogenous compounds*, as the protein substances, animal tissues and coloring matters.

And lastly, the general products of decomposition, as ulmin, humin, etc.

Such is a hasty bird's-eye sketch of the "Principles" of Dr. Löwig,—too slight indeed,—yet sufficient to show how deeply he is penetrated with the importance of the Theory of Radicals, and how far he is disposed to carry it in attempting to harmonize it with the nucleus theory and other hypotheses. That many of his views of proximate constitution will melt away before the light of scientific progress there can hardly be a doubt, whilst others—and important ones too—will be confirmed and registered among demonstrable realities. The grasp of mind necessary to embrace the rapidly increasing catalogue of organic products, so as to generalize successfully, belongs to the highest order of intellect; yet in the repeated attempts that have been made to discover the laws of a natural system, theory after theory has been erected, like the scaffolding around St. Peter's, to decay away, and be renewed by each generation, until, in the progress of time, the true laws of organic combination shall have been so far established as to need them no longer.

As a book for the advanced student, the work of Dr. Löwig will prove extremely useful from its clearness and comprehensiveness, and whilst he may be disinclined to admit, or at least pause to consider many of the ultra-theoretical views of the author, as not sufficiently supported by observation and experiment, he cannot but derive the greatest interest from his clear reasoning in numerous others.

A Clinical Phrase Book; in English and German. Containing the usual questions and answers employed in examining and prescribing for patients; questions in asking for and buying medicines, etc. etc. By MONTGOMERY JOHNS, M. D. Philada. Lindsay & Blakiston; 1853.

This unpretending little volume supplies a want often felt by those who, unacquainted with the German language, are unavoidably brought into contact with the people in Hospitals and Dispensaries, and more rarely in private practice.

The questions are arranged in the order commonly followed in examining a patient, according to the model of Recamier, given in Stillé's Elements of General Pathology; while the answers present that latitude which will suffice to elicit the sort of information necessary to correct diagnosis.

To facilitate its use, there is attached to the volume, an English-German and German-English pronouncing lexicon, containing all the words occurring in the phrases, with the chief technical terms of medical writers and apothecaries. The convenient size of the book enables it to be readily carried in the pocket, and we feel sure that no one who knows its usefulness, as we do, will fail to possess it. Our warmest thanks are due to the author for the admirable and satisfactory manner in which he has executed his task.

REPORTS OF SOCIETIES.

AMERICAN MEDICAL ASSOCIATION.

Held at New York, May 3d, 1853.

The American Medical Association held their sixth annual meeting in the Presbyterian Church, Bleecker street, the President, Dr. BEVERLY R. WELLFORD, of Va. in the Chair. The morning was occupied by the Committee of Arrangements, in receiving delegates from the several States. At 11½ A. M., the meeting organized, and the President welcomed the Delegates to the City. There were nearly five-hundred gentlemen present.

Dr. F. CAMPBELL STEWART, Chairman of the Committee of Arrangement and Reception, before reading the list of Delegates, congratulated the Association on the recurrence of its anniversary. Seven years had elapsed since the preliminary meeting of the Convention, which recommended the organization of this National Congress; and, as New Yorkers, the committee indulged in feelings of proud satisfaction at the triumphant success which had attended so important a movement, originating in their State. The labors of the learned body had been most arduous, but the result had not disappointed the expectations of the friends of reform and of progress in their profession. Mighty objects were aimed at; important achievements had already been accomplished; and a guarantee was afforded of the eventual fulfilment of the desires of those whose aspirations for the advancement and perfection of medicine, led them to propose the formation of this association, which, representing the whole fraternity throughout our wide-spread country, assembled annually, for scientific discussion, and to consult upon matters pertaining to the general welfare of the entire faculty. The five published volumes of their Transactions afforded abundant and conclusive evidence of the zeal by which they were actuated, and the ability which characterized the scientific labors of members. The meeting for this year had been generally anticipated with peculiar interest. An unusually large attendance had been expected. Numerous papers would be presented, and valuable reports were to be rendered; much of their time would be required for the consideration of subjects of grave importance. He assured them that their advent had been looked for anxiously, and their colleagues had been desirous to manifest their appreciation of the course in which they were engaged, and their estimation of the favor conferred by the Association in selecting this metropolis as the place for holding the present session. In the name of the united Profession of New York the Committee tendered them a sincere, hearty, and cordial welcome to their City.

Dr. S. then called over the list of Delegates, and announced that a majority were present.

The Vice-Presidents and Ex-Presidents of the Association were requested to take their seats on the platform with the President.

On motion, a recess of fifteen minutes was taken to allow the delegates to select one of their number from each State, as a committee to nominate officers for the ensuing year.

The following Nominating Committee was announced:

Michigan, - - -	Dr. Henry Taylor
New Hampshire, - -	" Josiah Crosby
Maine - - - -	" Isaac Lincoln
Connecticut, - - -	" Archibald Welsh
New Jersey, - - -	" Lewis Condict
Maryland, - - -	" Joel Hopkins
Indiana, - - - -	" Joseph Somes
Rhode Island, - - -	" Hiram Allen
Kentucky, - - -	" J. B. Flint
Tennessee, - - -	" J. B. Lindsley
Virginia, - - -	" Thos. P. Atkinson
New York, - - -	" J. M. Smith
Missouri, - - -	" Charles A. Pope
Iowa, - - - -	" J. C. Hughes
Ohio, - - - -	" R. L. Howard
Georgia, - - - -	" Henry F. Campbell
South Carolina, - -	" Henry R. Frost
Alabama, - - -	" G. A. English
North Carolina, - -	" J. G. Tull
Illinois, - - -	" N. A. Davis
Massachusetts. - -	" A. L. Pearson
Pennsylvania, - -	" F. West
Vermont, - - -	" E. S. Carr
Delaware, - - -	" H. F. Asken
District of Columbia, -	" Thos. Miller

Dr. ATLEE, of Pennsylvania, moved that immediately after the report of the Nominating Committee, the President be called upon to read his address, but, at the request of Dr. Condie, withdrew his motion until the report of the Treasurer should be read.

Dr POPE, of Missouri, extended an invitation to the Association to hold their next annual meeting, for 1854, at St. Louis.

Dr. CONDIE, of Pennsylvania, said he was instructed to invite the Association to hold their next annual meeting in Philadelphia.

Dr. HAYS, of Pennsylvania, although desiring that the Association should meet in Philadelphia, was forced to give his voice for next year in favor of St. Louis. He hoped that, at their next meeting, the claims of Philadelphia would be remembered.

The motion to meet at St. Louis was put and carried.

Dr. CONDIE, of Pennsylvania, Chairman of Committee on Publications, submitted a report from the Committee, with resolutions appended, making the assessment for the present year $5; authorizing the Committee to decide upon the terms at which the volume of Transactions for this year shall be furnished; and further authorizing them to take such measures in relation to disposal of the copies as they may deem expedient. Dr. Condie stated that a valuable paper would be submitted at

this meeting, the mere illustrations of which would cost $1,000 for printing.

The resolutions were adopted.

The Treasurer's Report showed the total receipts for the past year to be $1,905; paid out, $2,015; balance due to Treasurer $120.

On motion of Dr. Condie, the Committee was authorized to furnish the Chairmen of Committees on Epidemics with extra copies of their reports, respectively, at the expense of the Association.

The Secretary read communications inviting the Association to visit University Medical College, the Anatomical Museum, and Bloomingdale Lunatic Asylum.

Dr. F. C. STEWART presented a report, recommending the admission of Dr. Marshall Hall of London, Surgeon Mower, U. S. A., Surgeons Bache, Pinckney, Brownell and Simpson, U. S. N., Drs. Leonard and Betton, Florida, Hon. Dr. Bartlett, N. Y. Senate, Dr. Harris, Canada, Dr. Rodder, Canada West, Drs. McIlvaine and Pittman, American Medical Society, Paris, to participate in the proceedings by invitation.

On motion of Dr. Cox, a Committee was appointed to wait on Dr. Marshall Hall, and conduct him to a seat on the platform.

DR. WELLFORD'S ADDRESS.

The President's address was an eloquent exposition of the objects of the Association—a rehearsal of the good it had done, and an indication of certain modes by which it may do still more. The Society has been in existence some seven years. It grew out of a severely felt want of an organization of the scattered medical forces. A Convention assembled in this city, at the suggestion of the New York Medical Society, to take into consideration the condition of the profession, and to adopt some concerted action. Although the call was imperfectly circulated, about one hundred delegates from nineteen States of the Union responded to it by their personal presence. And they resolved to institute a National Association for the protection of their interests, the maintenance of their honor and respectability, the advancement of their knowledge and the extension of their usefulness. In the untried circumstances of their early history imperfections in the plan of organization were inevitable. The President advised careful and gentle revision, but deprecated all desultory innovations or sudden and radical changes.

There are those who affect to believe that the Association has hitherto effected nothing. In answer, the Doctor referred to the fact that it has aroused attention to the imperfections of medical cultivation—that it has demonstrated the necessity of raising the standard of medical acquirements, and done much through its potent leverage to raise the profession to its proper level. It has secured in many Colleges a lengthened course of lectures, and encouraged the well-disposed to require of the candidates for graduation higher attainments in general and professional knowledge. It has stimulated professional ambition, and drawn out from quarters whence no other means would have elicited it, highly important contributions to medical science. It was the action of the Association, in its early days, which directed the attention of the Legisla-

tures of several States to the high importance of collecting and measuring their vital statistics. Following its suggestion, laws have been passed in New York, Massachusetts, Rhode Island, Connecticut, Michigan and Illinois, we believe, and in several of the Southern States—not always of the most practicable sort or the best that could be devised, yet in every case highly honorable to the intentions of their framers, and likely to lead to more perfect systems—laws which provide for the registration of all the births, deaths and marriages within their several borders. In obedience to this recommendation of the Association, and in consequence of it, the Convention which recently sat in Virginia, for the purpose of amending the State Constitution, made the passage of a registration act obligatory on her Legislature. In compliance with that requisition a law was passed at its late session, the first under her new Constitution.

Another tangible and note-worthy result of the efforts of the Association, is the action of the Fedaral Government with reference to the adulteration of drugs. At the meetings in Baltimore in 1838, its attention was directed to the immense amount of adulterated and sophisticated drugs prepared in foreign countries, and imported into our own. Congress promptly responded to the recommendation of the Association, and in an act, approved June 26th, 1848, Inspectors were appointed, and the passage of any drug or medicine so adulterated or deteriorated as to be inferior in strength and purity to the standard established by the United States, London, Edinburg, French and German Pharmacopœias and Dispensatories, positively prohibited. The Examiner of Drugs in the New York Custom House, within five months after this law went into operation, had condemned and rejected no less than 13,000 lbs .of rhubarb, 2,500 lbs. of opium, 7,200 lbs. of jalap, 1,414 lbs. of gum gamboge, 1,400 lbs. of senna, 30,000 lbs. of spurious yellow bark, 3,000 lbs. of iodine, and 1,700 lbs. of myrrh, all of which, but for this law, would have found its way throughout our extensive country, and to the bedsides of the sick and the suffering, to mock them with their inertness, or poison them with their unsuspected strength. A Senator in Congress well remarked that, if the National Medical Association had advised no other reform than this, its labors would entitle its members to the gratitude of the country. Dr. Edwards, who was employed by the Secratary of the Treasury to visit the principal ports and ascertain the working of the law, found them to be: 1. An elevation in the quality and purity of the medicinal agents imported. 2. An entire prevention of adulterated and deteriorated drugs, &c., from entry and use. 3. No embarrassment to the honest importer and dealer. 4. An increased revenue. 5. Protection to the medical profession and community, and increased confidence in and a desire for the continuance and faithful application of the law. Spurious and adulterated articles now are almost entirely excluded from our markets, with the exception of those of home manufacture. Nor have these increased. Attention having been thoroughly aroused to the whole subject, adulterations cannot be practised with impunity as formerly.

Much has been done, and yet it is only a beginning. The learned

President next addressed himself to the task of indicating the points demanding immediate action.

The city affords advantages which the country practitioner cannot enjoy. In the city, professional men meet daily; every day they talk over affairs pertaining to their profession. Their emulation is kept alive; the ambition of the zealous is never permitted to flag. In the country it is otherwise; a professional consultation is only an occasional event, and anything like daily contact with friendly brethren is out of the question. Yet physicians are but men, and when all the talk of a village is of cattle and rich acres, and of politics, the physician talks of such things, too—grows rusty on medical matters, and becomes *au fait* on politics and farming. In some small degree to remedy this, let local medical societies be planted; and to facilitate their growth, the President advised the appointment of a committee to prepare a form of organization of both local and State societies, and that its adoption be earnestly recommended.

He called attention to the very unsatisfactory state of things which allows a diploma to be considered equivalent to a license to practice, and, indeed, tolerates anybody as a practitioner who chooses to dub himself a doctor—favored the invocation of State legislation on the subject, and the establishment of Licensing Boards to be entirely distinct from all bodies that grant diplomas.

He invited a recommendation to the authorities, charged with the duty of such action, that will shield the public from the home production of adulterated medicines. All that could be done to prevent the importation of these nuisances, the Federal Government has done; but there remain necessary such enactments by the several States as will make disreputable and unprofitable the business of preparing for the market inert medicines or drugs of a strength inferior to the officinal standard.

Dr. JOHN A. LAMB, of Pennsylvania, is the only one who has been appointed under power of the resolution adopted in 1852, to travel in Europe, and report on foreign medical affairs. With a touching tribute to the memory of Drs. Drake and Horner, members who have died during the twelvemonth, and a word of advice fitly spoken, the President concluded his Address.

Dr. HAYS, of Pennsylvania, moved the thanks of the meeting be presented to the President for his elegant, appropriate and eloquent address, and requested a copy for publication in the Transactions of the Association. Carried.

The Secretary read a resolution passed by the Medical Society of Virginia, recommending the appointment of a well-qualified chemist to analyze the most prominent nostrums of the day, and publish the results monthly in the leading newspapers of each State. Also, a communication from the President of the American Medical Society at Paris, appointing Drs. Pittman, Walton and McIlvaine to attend this meeting.

On motion of Dr. ATLEE, the Committee on Publication were directed to send a full set of the Transactions of the Association to the Medical Society in Paris.

A communication was received from Dr. RAMSAY, of Georgia, inclosing documents on personal matter, which were laid on the table.

The Committee on Nominations reported the following officers for the ensuing year.

For *President*—Dr. JONATHAN KNIGHT, of Connecticut.

Vice Presidents—Drs. USHER PARSONS, of R. I., LEWIS CONDICT, of N. J., HENRY R. FROST, of S. C., R. L. HOWARD, of Ohio.

Secretaries—Drs. EDWARD L. BEADLE, of N. Y., and EDWIN L. LEMOINE, of Missouri.

Treasurer—Dr. D. FRANCIS CONDIE, of Pennsylvania.

The Committee reported St. Louis, Mo., as the place to hold the next annual meeting.

The report was adopted.

Drs. Gooch, Watson and Atlee were appointed a Committee to conduct the President elect and other officers to their seats.

Dr. KNIGHT, on taking the Chair, returned thanks for the honor conferred on him.

Dr. ATLEE, of Pennsylvania, moved a vote of thanks to the late President, Dr. Wellford, for his dignified, courteous and efficient manner in the Chair. Carried unanimously, the members rising.

A vote of thanks was also passed to the retiring Secretary, Dr. Gooch.

On motion of Dr. HOPKINS, of Maryland, it was resolved that no member speak more than ten minutes on any subject at one time.

Dr. STEWART, on part of Committee of Arrangements, suggested that the Association meet each day from 9 to 12 A. M., and from 1 to 4 P. M.

On motion of Dr. GOOCH, the meeting adjourned to 9 A. M. on Wednesday.

Second Day, May 4th.

The Association met at 9 A. M. There was a large attendance of delegates. President in the Chair.

Dr. E. L. BEADLE, Secretary, read the minutes, which were adopted.

Dr. COX, of Maryland, moved for a re-consideration of the vote adopting the minutes, to allow of a correction in the Special Report of Committee of Arrangements, inviting Drs. Pinckney and Bache, U. S. N., to take part in the proceedings. These gentlemen had a right to sit as delegates from the Army and Navy.

Dr. STEWART explained, and read from the 2d article of the Constitution relating to delegates.

Dr. WATSON, of New York, stated they had always been received as delegates.

The motion to reconsider was put, and lost.

Dr. COX hoped the Association would not take any action that would give offence to the Army and Navy Medical Institutions. He moved that Drs. Pinckney and Bache be received as regular delegates.

Dr. PINCKNEY, U. S. N., asked to be heard, and claimed his right to a place as delegate, having been formerly received as such, and signed the constitution.

Dr. F. C. STEWART offered to following as an amendment to Dr. Cox's motion:

Resolved, As the sense of this Association, that under its present Constitution delegates can be received from the U. S. Army and Navy Medical Bureaus, when appointed by the Chief of the Army and Navy Medical Bureaux.

The amendment was adopted.

Dr. STEWART, from the Committee of Arrangement, reported that several members had registered their names since the report of yesterday.

Dr. COX, of Maryland, proposed Dr. Borland, of Arkansas, as a member by invitation.

Dr. SPENCER proposed Dr. Hurd, of New York, but, on explanation from the Chair, withdrew the proposition.

Dr. C. D. MEIGS, of Philadelphia, presented a report on "Acute and Chronic Diseases of the Neck of the Uterus," with a request that it should be referred to Committee on publication without reading.

The report was adopted and referred.

Dr. COVENTRY, of New York, moved for a suspension of the order of business, to take up the subject of proposed amendments to the Constitution.

Dr. CASH, of New York, moved that the resolution be laid on the table, and the regular order of business be proceeded with. Carried.

The Secretary proceeded to call up reports from special committees. Out of a list of twenty-seven committees only four reported. The rest either did not answer, or were not ready.

Dr. CONDIE, of Pennsylvania, Chairman of Committee on Causes of Tubercular Diseases, stated that in consequence of his duties as Treasurer and Chairman of Committee on Publication, he had not been able to complete his report. On motion of Dr. ATLEE, the Committee was continued.

On the part of Dr. Porcher, of South Carolina, Dr. CONDIE stated that he had sent to him the report of Committee on "Toxicological and Medicinal Properties of our Cryptogamic Plants," but with the request that it would be left, for further additions, to the Committee. The Committee was continued.

Dr. G. EMERSON, of Pennsylvania, Chairman of Committee on "Agency of the Refrigeration produced through upward radiation of heat, as an exciting cause of Disease," presented his report, which was referred to Committee on Publication, and read an abstract. The sanitary lesson designed to be inculcated in this paper, is the importance of guarding against exposure to the refrigerating effects of nocturnal radiation, especially in sickly places and during epidemic periods. The means of effecting this are shown to be extremely simple and always at hand, as anything will answer the purpose which may be interposed to cut off the view of the open sky, and thus prevent "upward radiation."

Dr. H. F. CAMPBELL, of Georgia, presented a report on Typhoid Fever, which was referred to Committee on Publication. Dr. Campbell said that he had little experience in the actual treatment of typhoid fever, as it rarely prevails in the district where I am located. I have

therefore given a condensed history of the existing pathology regarding it, set forth by other writers, accompanied with my own opinion that the disease lies and has its origin in the ganglionic system of nerves. If you divide some of the superior branches of these nerves, there is an immediate ecchymosis of the eye different from the ganglionic congestion observable during typhus fever. I have called attention to the existence and causes of the maculated spots which appear upon the surface in the one variety of fever and extend through the alimentary canal in the other; and reason that the latter morbid appearances are the result of the diseased ganglionic plexus extending from the superior cervical vertebræ through the vertebral column to the ganglions of the sacrum. In referring typhoid fever to this cause, I have recorded the appearances presented in the pharyngeal plexus, the larynx, œsophagus, stomach and duodenum, (which is separated in a great degree from the influence of the cerebro-spinal system,) and I have then pointed out the existence of the ulcerations of the lower portion of the ilium, and to a great extent, as a reason for my belief. I have traced the different appearances observed in typhus fever. I have examined the theory of Woods upon the deficiency of fibrin in the blood, and endeavored to show that typhus and typhoid fevers are quite distinct diseases.

Dr. ATLEE, of Pennsylvania, Chairman of Committee on Epidemics in New Jersey, Pennsylvania, Delaware and Maryland, said that the Committee were unable to report, in consequence of not receiving any communications from gentlemen in those States. The Committee had only received two communications—one from Philadelphia and one from Franklin county, Pennsylvania. He called upon gentlemen practising in these States to furnish the Committee with the results of their experience.

Prof. Chalmer, Chicago, moved the following:

Resolved, That this Association earnestly recommend to the local Societies in different portions of our country, to appoint Committees, whose duties it shall be to record the prevalence of epidemic or other diseases, and the general state of health in their respective localities, and to transmit said reports to the Committees of the Society on epidemics, through the State Societies where they exist.

Resolved, That the Secretaries be requested to secure a wide publicity to the above resolutions, by such means as they may deem proper.

The resolutions were adopted.

Dr. WELLFORD announced that Dr. Haxall, of Virginia, Chairman of Committee on Epidemics in Virginia and North Carolina, and Dr. Bolling, of Alabama, on Epidemics in South Carolina, Georgia, Florida and Alabama, had resigned their appointments as Chairmen of such Committees.

Dr. SUTTON, of Kentucky, presented a report on Epidemics in Tennessee and Kentucky, which was referred to Committee on Publication.

Dr. PITCHER, of Michigan, presented a report on the subject of Medical Education, which he was requested to read at length. The report was a long and able document, containing many valuable suggestions to prevent the spread of Quackery, and on the best means of

training the medical student. The Committee proposed that all candidates for degrees shall have studied at least three years, and recommend the extension of lecture seasons to six months. The Committee repeated their high opinion of the benefits to be derived by students from bedside experience, as superior to lectures and flitting hospital visits, and suggested a supplementary school of practice. They would not discourage medical schools through the country, but foster them as useful, and trust to the private instructor and the hospitals as schools of practice. The Committee asked leave to conclude their report by presenting the following resolutions:

Resolved, That the Association reaffirm its formerly expressed opinions, on the value and importance of general education to the student and practitioner of medicine, and that it would gladly enlarge its rule on this subject, so as to include the Humanities of the schools, and the Natural Sciences.

Resolved, That in the opinion of this Association, a familiar knowledge with the elements of Medical Science should precede Clinical instruction.

Resolved, That in order to accomplish the latter, the Hospitals, when elevated to the rank of Schools of Practice, and the intelligent private preceptor, are the most efficient instrumentalities to be used for that purpose.

On motion of Dr. ATLEE, the report and resolutions were adopted.

The Committee on Volunteer Communications reported, through Dr. Joseph M. Jmith, of New York, upon the number of contributions received. Dr. Smith said that the Committee had awarded one prize of $100 to Dr. Waldo J. Burnett, of Boston, Mass., for his treatise upon "The Cell; its Physiology, Pathology, and Philosophy"—"*Natura in minimis maxima est.*"

Another prize of $100 had been awarded to Dr. Washington L. Atlee, of Philadelphia, for his treatise upon "The Surgical Treatment of Fibrous Tumours of the Uterus." "*Palmam qui meruit ferat.*"

Dr. ALDEN MARCH, of New York, made a verbal abstract of his paper on "Diseases of the Hip Joint," which was favorably reported on by the Committee; and, on motion of Dr. SMITH, he was requested to read the paper, during recess to-day, in Crosby street Medical College.

Dr. PALMER, of Chicago, moved the following:

Resolved, That this Association earnestly recommend to the local Societies in different portions of our country, to appoint Committees, whose duties it shall be to record the prevalence of epidemics or other diseases, and the general state of health in their respective localities, and to transmit said reports to the Committees of the Society on Epidemics, through the State Societies where they exist.

Resolved, That the Secretaries be requested to secure a wide publicity to the above resolutions, by such means as they may deem proper.

The resolutions were adopted.

Dr. ATLEE, Pa., called the attention of the Association to resolutions passed at the last annual meeting of the Association, for purchasing a suitable stone for the Washington Monument.

Dr. BLATCHFORD, N. Y., offered the following:

Resolved, That the suggestions in the President's Address, touching the licensing power, be referred to a Committee of five, of which Dr. Wellford shall be the Chairman, to prepare some plan whereby the subject may be brought fairly before the Profession, and, if deemed advisable, that the Legislatures of the several States may be memorialized to carry out the recommendations of this Association—the Committee to report at the next meeting of the Association.

Dr. GARNETT, Washington, D. C., proposed the following as an amendment:

Resolved, That a Committee of five be appointed by the President of this Association to prepare a memorial to the Legislative bodies of the several States of the Union, praying that a law be passed prohibiting the Faculty of any medical institution which may at present exist, or which may hereafter be established within the limits of said State, from conferring the degree of Doctor of Medicine upon any candidate for graduation who has not previously graduated at some literary institution, or who, upon examination by a competent Board, is not found to possess a good English and Classical education.

Resolved, That regarding the present term of preparatory study adopted by the Medical Colleges of the United States, too limited to enable students of medicine to acquire such a competent knowledge of the profession as should entitle them to receive the degree of Doctor of Medicine, a recommendation be incorporated in said memorial that some Legislative action be also had upon this subject.

Resolved, That it be the duty of the President and Secretary of this Association, to transmit, through the Executive heads of each State, a copy of said memorial to their respective Legislative Assemblies, and that a Circular be addressed to the members of the Medical Profession, resident at, or convenient to the seats of Government of the several States, requesting them to use every practicable exertion consistent with the honor, dignity, and good repute of the profession, to procure the passage of a law in accordance with the foregoing resolutions.

On motion of Dr. CASH, the resolutions and amendments were laid on the table, to be taken up at an early period, and the Association took a recess for one hour.

Afternoon Session.

The Association met at 2 o'clock, P. M. The Secretary read an invitation, from Dr. Griscom, to visit the New York Hospital.

Dr. STEWART, on the part of the Committee of Arrangements, moved that Dr. Robert R. Halley, of Beyroot, Syria; Dr. James G. Cooper, Washington Territory, and Dr. H. Williams, from Southern Illinois, be invited to take part in the proceedings. Carried.

The following resolutions, offered by Dr. CHARLES LEE, a permanent member, were read, in his absence, by the Secretary.

Resolved, As the sense of this Association, that those Medical Colleges which give two courses of lectures annually, each of which counts as a separate course, have virtually violated and forfeited their Charters,

which do not contemplate but one annual session, (thus making two Colleges out of one.)

Resolved, That the practice in question is calculated to lower the standard of attainment in the profession, and subjects those who countenance it to the imputation of acting from mercenary motives.

Resolved, That no delegates shall hereafter be received by this Association, from any Medical Schools which give two courses of lectures annually; each of which counts towards a degree.

On motion of Dr. ATLEE, of Pennsylvania, the resolutions were laid on the table.

Dr. STEWART read the following resolutions, offered by Dr. Stephen W. Williams, of Mass., a permanent member:

Resolved, That the thanks of this Association be presented to Dr. WINSLOW LEWIS, of Boston, a member of the Massachusetts Legislature, for the bill which he has presented and endeavored to sustain, providing that "no druggist, apothecary, or person engaged in manufacturing medicines, or compounds to be administered as medicines, (except such as are published in standard works of chemistry, materia medica, or pharmacopœia,) shall offer the same for sale in any way, till he has filed a complete recipe in English, sworn to before a legal authority constituted for such purpose."

2. *Voted,* That a Committee be appointed by this Association for the purpose of petitioning Congress and State Legislatures to enact regulations and laws similar to the above.

Also, as we are constantly called upon to deplore the ravages of death among the illustrious and worthy members of our profession throughout the United States:

Resolved, That a Standing Committee be appointed by this Association to procure memorials of the eminent and worthy dead among the distinguished physicians of our country, both in and without the pale of the Association, and present them to this Association for publication in their transactions.

The first resolution, relating to Dr. Lewis, was adopted.

To the second Dr. COX, Md., moved an amendment, confining the memoirs to distinguished members of the Association.

Dr. MORGAN, Washington, thought the Association would not be able to meet the increased expense such an addition to their transactions would cause. He moved to lay on the table. Carried.

Dr. BUCK, N. Y., read a paper on morbid growths within the larynx, and exhibited a specimen, with report of the case. Referred to Committee on Publications.

Dr. J. K. MITCHELL, Pa., offered the following:

Whereas, The claim of Naval Medical officers to a defined rank, assimilated with the grades of officers of the line of the Navy, has not yet been decided by Congress, therefore

Resolved, That the President of this Association appoint a Committee of three, which is hereby instructed to communicate to Congress, through the presiding officer of each House, at the commencement of its next session, an expression of the interest felt by the American Medical

Association of the United States, for their professional brethren employed in the Navy, as set forth in resolutions unanimously adopted at several previous sessions of this body.

Dr. JACKSON, of Philadelphia, seconded the resolution.

The President stated that the bill had passed one branch of our National Legislature.

Dr. PINCKNEY, U. S. N., made a statement of the action had in the National Legislature.

The resolution was put and adopted.

Dr. STEVENS, of New York, moved that the President be Chairman of the Committee. Carried.

Dr. HOOKER, of Connecticut, offered the following, which was adopted:

Resolved, That the delegates from the several States be requested to appoint a Committee, who shall aid the Committee of Publication in procuring subscriptions, and in distributing the annual transactions of the Association.

Dr. BOLTON, Virginia, moved a resolution expressing the warm commendation of the Association towards the medical department of Michigan University, for its co-operation in elevating the standard of the profession.

A discussion ensued, in which Drs. PALMER and BOLTON advocated the resolution, and Dr. HOOKER and others took ground against it. Finally, the resolution was withdrawn.

Dr. Muran presented the following report, in relation to the necessity of each emigrant ship being provided with a surgeon:—

The undersigned, Chairman of a Committee appointed by the American Medical Association, to memorialize Congress upon the importance of enacting, as an act of duty and humanity, a law making it obligatory upon all vessels conveying emigrants to have a regular surgeon on board, respectfully reports: That the memorial signed by all the members of the Committee, the President and Secretaries of the Association, was, through the medium of the Hon. A. P. Butler, Senator from South Carolina, presented in May, 1852, and was referred to the Committee on Commerce. It is with much regret that the undersigned has to report that the Committee on Commerce, having, it is presumed, other subjects of a much graver import in a pecuniary point of view, but surely not in a humane and philanthropic one, made no report. It was not contemplated that any action would have been taken on the subject at the late period of the session of 1851; but sanguine hopes were entertained that some report would have been made in the session of 1852. The undersigned, in common with every good citizen, has a respectful consideration for our legislators and public functionaries, but must honestly confess that the legislation growing out of outward pressure, for ulterior purposes of individual or political aggrandizement, renders it difficult to have such prompt and efficient action as should be reasonably expected upon questions involving sacrifice, advancement, or Hygienic improvement. The undersigned, however, is fully impressed that no intentional disrespect was meant by the Committee on Commerce in allowing the

memorial to remain in their archives unnoticed; and now that the Presidential election, and other collateral subjects, incidental or having a bearing thereto, are settled, it is but reasonable to suppose that the Senate and House of Representatives would consider any measure as regards science or medical association; and likewise, if possible in legislation, adopt the same. There has been every assurance given to the undersigned, that the measure will have a proper consideration at the next session of Congresss, and therefore he asks that the Committee be continued, and considered as reporting progress.

THOS. Y. SIMONS, M. D., Chairman.

The foregoing report was accepted, and the Committee directed to prepare a memorial to Congress.

The following report was then presented:

The undersigned, Chairman of a Committee of the American Medical Association to memorialize Congress in accordance with a resolution of Dr. Fulton, of Georgetown, Kentucky, to have the medical statistics of the United States census printed separately, for the use of the medical profession, respectfully reports:—

That a memorial was drawn up, and signed by the Committee and the President and Secretary of the American Medical Association, and was placed in the charge of the Hon. Dr. Jones, a member of the Association, and of Congress, to be presented to the House of Representatives. From information received from him, it seems, among other objections, a grave one was offered, viz:—the want of scientific arrangements, and the unreliability of the returns in general. In other words, that they were of such a character as to add little to the usefulness of the profession or the honor of the country. The undersigned, respectfully, on the present occasion, calls the attention of the members of the Association to the great importance of using their best influence to induce the legislatures of their respective States to establish a registration of births, marriages and deaths; a measure of incalculable value as regards vital statistics. The experience and gradual progressive improvement in the reports of Massachusetts, clearly demonstrate that while at first they were comparatively imperfect, yet much information was obtained, and every year the reports have become more satisfactory.

THOS. Y. SIMMONS, M. D., Chairman.

The report was adopted, and the Committee continued.

Dr. PEASLEE, of N. H., offered a resolution, setting forth that various systems of irregular practice were encouraged by the regular medical Colleges, in giving diplomas to such as subsequently engaged in them, and moving that the Colleges refuse to admit all persons who intend to engage in any other than the regular practice of medicine, to an examination.

Dr. SAYRE, of N. Y., considered the resolution would not meet the intention. He moved an amendment, petitioning Congress for the passage of an act, empowering the Faculty in any College, to publicly withdraw diplomas from graduates who had, in their judgment, forfeited a right to the same.

A warm discussion ensued, in which Drs. HOOKER, Conn., ATLEE, Pa., PEASLEE, and others, took part.

On motion of Dr. GOOCH, the resolution and amendment were laid on the table, and the Association adjourned to Thursday morning at 9 o'clock.

Third Day, May 5th, 1853.

The Association met at 9 A. M., Dr. JONATHAN KNIGHT, President, in the Chair.

The Secretary, Dr. E. L. BEADLE, read the minutes, which were approved.

Dr. STEWART, Chairman of Committee on Arrangements, reported the names of several delegates who had registered since last report.

Dr. W. HOOKER, Connecticut, offered the following, which was adopted:

Resolved, That a Committee of Five be appointed, whose duty it shall be, in compliance with the suggestions of our late President, Dr. Wellford, to report our plans of organization for State and County Societies, and that the Committee be requested to report, if possible, during the present meeting of the Association.

Dr. ZEIGLER, Pennsylvania, offered the following, which was referred to Committee on Organizing State and County Societies:

Inasmuch as the universal aggregation and organization of the members of the medical profession in the United States has long been a desideratum but partially attainable until the adoption of the present mode of organizing local and general societies in imitation of and in conformity with the confederacy of this country; and whereas, notwithstanding this consolidation has thus been more completely and perfectly effected, a very large portion of the profession still remain isolated and unassociated, thus retarding and preventing the more rapid attainment of those exalted objects involved in this universal professional union in one great brotherhood; and inasmuch as the present general mode of perfecting further and final professional aggregation and consolidation is comparatively imperfect, inefficient, and protracting, and hence will require an almost indefinite period for its full accomplishment and final consummation and completion; and inasmuch as some more general and systematic effort for the speedy and positive realization of this highly important object is yet greatly desirable; therefore

Resolved, That the American Medical Association hereby reiterate the repeatedly previously expressed desire for the immediate formation and organization of County and State Medical Societies in every part of the country in which they have not yet been established.

Resolved, That every County Medical Society be and is hereby recommended to dispense with the present system of acquiring members by the previous pro-formal manifestation of personal desire on the part of applicants for such association, and to substitute therefor that of the immediate and voluntary election to membership therein, of every unassociated eligible physician.

Resolved, That all physicians thus voluntarily elected, and subsequently neglecting or declining to respond to and unite themselves with the general profession, shall be considered as estimating their own personal views, and private relations and interests, above and in opposition

to those of the profession generally, and, as thus antagonistic to its exalted objects, cannot therefore consistently expect the continued enjoyment of the usual rights and privileges of professional intercourse and fellowship.

The Secretary read a notice, requesting delegates from any States which were not represented on the Committee on Nomination, to elect representatives to sit with the Committee at 56 Bleecker street.

Dr. N. S. DAVIS, of Illinois, reported at length, on the Medical Literature of 1853. There are now published in the United States twenty-eight medical periodicals, of which four are issued quarterly, six bi-monthly, fifteen monthly, two semi-monthly, and one weekly. One of the monthlies is published in the German at New York, and one in French, at New Orleans. Of the aggregate number of pages published, about one-half were original matter. This aggregate consists of the record of cases occurring under the observation of their writers, of which a very large proportion lose their value for lack of that fullness of detail and scope, which are essential to make them reliable data for the abstraction of practical deductions—articles embodying the statistical results of certain diseases and surgical operations, and essays on special subjects, and the details of experimental inquiries—of all which classes some of the more important specimens were named in the report. It is believed that a decided improvement has taken place in this department of medical journalism during the past year. It is shown most distinctly in the more frequent reports of the use of the microscope and its application to physiological and pathological researches. But the report scores the journals for an abundance of material furnished of another order—crude, ill-digested essays, illogical, incomplete and consequently mischievous articles, which serve to advertise the writers' names and residence, and, unwittingly, their ignorance.

The Review department of our medical periodicals is of all the most defective. There are a few honorable exceptions, but the large majority afford little more than a few meagre pages of booksellers' notices, serving to advertise the work whose title is given, and seldom affording any impression whatever of the character and contents of the book named.

The number of journals in this country is greater in proportion to the population than in any other. Whether we are gainers in their quality from this fact is very questionable, but this, at least, it secures —a greater number of professional readers. A very copious contribution to our medical literature is made in the form of the transactions of the State, County and other Medical Societies. The report hints that their character is decidedly superior to that of the average of the original papers contributed to the journals.

Among the more valuable monographs that have issued from American authors during the year, are, the treatises of Dr. Swett on the Chest; Dr. Flint on Continued Fever; Dr. Edward Coale, on Uterine Displacements; Dr. H. H. Smith's Operative Surgery; Dr. Piper's Illustrated Surgery; Dr. Horace Green's Polypi of the Larynx and

Œdema of the Glottis; Dr. Biddle's and Dr. Tully's Materia Medica; Dr. Dickson's Life, Sleep and Death; and Dr. Mackall's Notes on Carpenter's Physiology. Besides these, many new editions of standard American works, and the revision and translation of many of foreign origin, show that there is no lack of patronage of our home literature, nor a lack of readers for professional works, either domestic or foreign. In matters of minutiæ, in the details of analysis and of nice scientific discrimination, we have looked abroad for our medical teachings. But in the details of practice, in bold, independent, inventive and energetic thinking on medical topics, we are not copyists, nor in any respect imitators.

The defects of our medical literature are very obvious and readily traceable to their causes—to wit, a lack on the part of medical writers of sufficient preliminary education, the absence of clear and definite perceptions of the fundamental principles of physiology and pathology, defective modes of investigation, and the epidemic haste shared by them with all other writers in our country, with which their productions are surrendered to the press. These difficulties will be remedied when the public sentiment of physicians has become what it ought to be; when medical critics are honest in expressing their convictions, and medical men avail themselves of the benefits that must accrue from the organization of their forces into local, State and National Associations.

The following he indicated as the principal means of advancing the standard of Medical Literature: 1. To adopt such means as would be calculated to increase preliminary study on the part of students. 2. Greater strictness on the part of Medical Colleges in their examinations. 3. Offering premiums for the best original Medical Essays by State and County Medical Societies. 4. Formation of Medical Libraries. 5. To labor for an International Copyright. The future is bright for us, the past full of eloquent lessons. If we heed them and do for the future what we ought, American Medical Literature will yet attain to an elevation corresponding with our country's social and political destiny.

The Secretary read a communication from Robert Kelly, Esq., inviting the Association to visit the House of Refuge for reformation of juvenile delinquents.

Dr. S. JACKSON, of Pennsylvania, stated that he had received a paper from one gentleman on Electricity, as applied to predictions of meteorological changes.

Dr. MCNAUGHTEN moved to refer to Committee on Spirit Rappers. Laid on the table.

Dr. YANDELL, of Kentucky, offered the following, which was adopted:

Whereas, By the dispensation of an inscrutable Providence, Dr. DANIEL DRAKE has been removed since the last meeting of this Association from the scene of his earthly labors,

Resolved, That in the death of Dr. Drake the American Medical Association has lost one of its most honored members, and the American medical profession one of its brightest ornaments.

Resolved, That his steady devotion to his profession, through a long

life, his zeal, activity and unceasing efforts to advance its interests, afford an example worthy of the imitation of every young physician.

Resolved, That this Association will cherish the memory of Dr. Drake for his many virtues, and for his labors which have adorned and elevated our profession.

The resolutions were adopted by a rising vote.

The President read a resolution, offered by Dr. CLEVELAND, of Vermont, calling for the appointment of a Committee to investigate the value of Galvanism as a therapeutic agent.

On motion of Dr. GOOCH, the resolution was referred to Committee on Nominations.

Dr. WELLFORD, of Virginia, stated that the State of Louisiana was not represented, and moved that Dr. Douglass, of Louisiana, who was present, be invited to take his seat as a delegate from that State. Carried.

On motion of Dr. PALMER, of Virginia, the resolution offered yesterday, from the Virginia Medical Society, recommending the appointment of a Chemist, and laid on the table, was taken up for consideration.

Dr. PARKER, of Virginia, offered the following as an amendment:

Resolved, That this Association recommend Congress to consider the propriety of passing a law compelling all importers of nostrums to state upon all compounds thus imported their true constituents, and in English.

Resolved, That the Secretary be instructed to forward a copy of these resolutions to the Executive of the general Government.

An amendment to strike out all after the word "English," was accepted.

The first resolution was read by the Secretary.

Dr. BOND, of Baltimore, objected to the resolution, because it could do no good, and was likely to do a great deal of injury. He moved to lay on the table, but withdrew it to allow discussion.

Dr. HOOKER, of Connecticut, said the facts from the State of Maine would answer the objections of Dr. Bond. An act had been passed there which was found to be a death-blow to this system of quackery. But on petition of the people and clergy, who were in favor of encouraging it, the law was repealed. He wished parties to know what they swallowed.

Dr. SAYRE, of New York, said that every notice that was taken of any such quackeries only tended to advertise them, and could accomplish no useful purpose. He proposed to lay on the table. Lost.

Dr. COX, of Maryland, never knew any good to follow prohibitory measures against quackery. In the State of Maryland, a set of quacks known as Thomsonians, flourished under prohibitory legislation, and died away when given every freedom and latitude. He believed the surest death-blow to quackery was to treat it with contempt and silence. It was unworthy of any grave notice from this Association. He believed the true remedy against quackery was to be found in attention to their Association.

Dr. BOLTON, of Virginia, drew the attention of the Association to a resolution passed yesterday, thanking Dr. Winslow Lewis for his efforts in supporting a bill before the Massachusetts Legislature. There was a mistake in thinking that the resolution proposed to prohibit the sale of these quack medicines; it only proposed that the ingredients of which they were composed should be set forth on the label. This would divest the medicines of the great charm of mystery which gave them such importance in the minds of the public. They would see that for a few pence they could procure some simple medicine, which was the chief ingredient in the expensive bottle.

Dr. RICHARDS, of Ohio, and Dr. JACKSON, of Massachusetts, followed in opposition to the resolution. The analyzing of these nostrums, by order of the State, would be giving a sanction to their sale.

The reading of the resolution was called for, and a vote taken.

PRESIDENT.—The Nays are the loudest; whether they are the more numerous, I cannot say.

The House was counted, and the resolution laid on the table.

Dr. CONDIE, of Pennsylvania, and Dr. COX, of Maryland, offered the following resolutions, which were adopted by rising.

Resolved, That we have heard with sincere regret of the death of our late fellow member, Dr. ISAAC PARRISH, of Philadelphia, who was distinguished by his early and earnest advocacy of the establishment of this Association, by his ardent interest in its proceedings, and by his valuable contributions to its published proceedings.

Resolved, That in the demise of Dr. WILLIAM E. HORNER, which has occurred since the last annual session of this body, the American Medical Association has lost one of its illustrious and useful members; and the science of medicine, an indefatigable student and most distinguished teacher.

Resolved, That the memory of the gifted subjects of the resolutions, dear as it must ever be to the lovers of medical science universally, will be especialy cherished by this Association, to whose great objects and aims, their last efforts were, during life, promptly and liberally bestowed.

Dr. CONDIE, of Pennsylvania, replied to inquiries received, in reference to back numbers of the Transactions.

Dr. YANDELL, of Kentucky, presented a report received from Dr. S. D. Gross, Kentucky, on the results of Surgical operations for the relief of malignant diseases, which was referred to the Committee on publication. Dr. G. read a brief abstract.

From the facts and statements which have now been presented, embracing the opinions of many of the most intelligent, experienced and distinguished practitioners in different ages, and in different parts of the world, the following conclusions may be legitimately deduced:

First—That cancerous affections, particularly those of the mammary gland, have always, with a few rare exceptions, been regarded by practitioners as incurable by the knife and escharotics. This opinion, commencing with Hippocrates, the father of medicine, has prevailed from the earliest records of the profession, to the present moment. Nature

never cures a disease of the kind; nor can this be effected by any medicine, or internal remedies, known to the profession.

Secondly—That excision, however early and thoroughly executed, is nearly always, in genuine cancer, followed by relapse, at a period varying from a few weeks to several months, from the time of the operation.

Thirdly—That nearly all practitioners, from the time of Hippocrates to the present day, have been, and are still averse to any operation for the removal of cancerous tumors, after the establishment of ulceration, rapid growth, firm adhesion, organic change in the skin, lymphatic invasion, the cancerous dyscracy, or serious constitutional derangements; on the ground that, if had recourse to, under these circumstances, the malady almost inevitably recurs in a very short time, and frequently destroys the patient more rapidly than when it is permitted to pursue its own course.

Fourthly—That in all cases of *acute* carcinoma, or, in other words, in all cases of this disease, attended with very rapid development and great bulk of the tumor, extirpation is improper and unjustifiable, inasmuch as it will only tend to expedite the fatal result, which, under such circumstances, always take place in a very short time.

Fifthly—That all operations performed for the removal of encephaloid cancer and its different varieties, are more certainly followed by rapid relapse than operations performed upon scirrhus or hard cancer.

Sixthly—That in nearly all the operations for cancerous diseases, hitherto reported, the history has been imperfectly presented, being deficient in the details which are necessary to a complete and thorough understanding of the subject in each case. This remark is particularly true in reference to the diagnosis of the malady, the minute examination of the morbid structure, and the history of the case after the operation, as to the period of relapse, the time and nature of the patient's death, and the result of the post-mortem examination.

Seventhly—That cancerous affections of the lip and skin, now usually described under the name of cancroid diseases, are less liable to relapse after extirpation than genuine cancerous maladies, or those which are characterized by the existence of the true cancer-cell and cancer-juice.

Eighthly—That, although practitioners have always been aware, from the earliest professional records, of the great liability of cancer to relapse after extirpation, a great majority of them have always been, and still are, in favor of operation in the early stage of the disease, especially in scirrhus, before the tumor has made much progress, or before there is any disease of the lymphatic ganglions, or evidence of the cancerous cachexy.

Ninthly—That many cases of tumors, especially tumors of the breast and testicle, supposed to be cancerous, are in reality not cancerous, but of a benign character, and consequently, readily curable by ablation, whether effected by the knife or by escharotics. It is to this circumstance that we must ascribe the astonishing success which is said to have attended the practice of Hill, of Scotland, Nooth, of England, and Flajani, of Italy.

Tenthly—That all operators insist upon the most thorough excision

possible; removing, not merely the diseased mass, but also a portion of the surrounding and apparently healthy tissues, as well as all enlarged and indurated ganglions.

Eleventhly—That the practice has always prevailed, and still obtains, to save, if possible, a sufficient amount of healthy integument to cover the wound, and to unite, if possible, the wound by the first intention; on the ground that these precautions will tend much to retard, if not to prevent, a recurrence of the disease.

Twelfthly—That much stress is laid by writers upon a properly regulated diet, and attention to the bowels and secretions after operation, as means of retarding and preventing relapse.

Thirteenthly—That there is no remedy, medicine or method of treatment which has the power, so far as we are enabled to judge of its virtues, of preventing the reproduction of the morbid action after operation, no matter how early or how thoroughly it may be performed.

Fourteenthly—That life has occasionally been prolonged and even saved by operation after relapse, as in some of the remarkable cases mentioned in a previous part of this report; but that, as a general rule, such a procedure is as incompetent to effect a permanent cure as a first extirpation.

Dr. BRYAN, of Pennsylvania, rose to correct a statement made yesterday, by Prof. Jackson, that a young gentleman had been allowed to graduate in Philadelphia Medical College, after two weeks study.

Prof. JACKSON stated that he had received the information from a gentleman, whom he named, and had used it as an illustration of his argument.

Dr. GOOCH called up the subject of the graduating pledge, proposed by Dr. Peaslee, of New Hampshire, last evening, and laid over, and proposed the following resolutions:

Resolved, That this Association earnestly recommends to all the respectable Medical Colleges of the United States to administer to their graduates, previous to their receiving the diploma, some pledge that they will maintain, to the best of their abilities, the honor and dignity of the profession; and that they will forfeit their degrees, whenever they desert the Orthodox system of medicine.

Resolved, That the schools be urged not to graduate any man without requiring him to read the National Code of Ethics and publicly give his consent to abide by it, and that they will reserve to themselves the right to withdraw the diploma, publicly, whenever *the graduating* pledge has been violated.

There were, said Dr. G., two schools which had already adopted such rules. Unfortunately, as things stood, gentlemen were allowed to graduate on payment of their fees, without knowing there was such a thing as a "Code of Ethics" in existence, and permitted to go forth among medical men as their equals in practice. The consequence was, systems of quackery, and want of proper *esprit du corps* among members of the profession, in many instances.

Dr. GARNETT, of Washington, spoke to the resolution.

Dr. ATKINSON, of Virginia, inquired how the diploma could be withdrawn.

Dr. GOOCH replied that the diploma could be always withdrawn, if given under these conditions.

Dr. JOHN H. PHILLIPS, of New Jersey, offered the following amendment:

Resolved, That it is the duty of all Boards of Examiners, to whom candidates may apply for examination or approval, to admit none but those who give satisfactory evidence of a good preliminary education, and that a regular Course of Medical Practice will afterwards be pursued, and who shall subscribe to the Code of Ethics adopted by this Association.

Dr. COX, of Maryland, thought the resolution contemplated an extraordinary act of legislation, and there would be great difficulty in applying the principle. The power of revoking a diploma, once given under the legal sanction of a charter, was a dangerous one to be intrusted to any set of men.

Dr. ATKINSON, of Virginia, thought that, until the millenium, quackery would exist in the profession to some extent, and it was vain to legislate against it.

On motion of Dr. SAYRE, of New York, the Association took a recess of one hour, without disposing of the resolution.

Afternoon Session.

The Association was called to order at 1½ P. M.

The consideration of Dr. Gooch's resolution was resumed.

Dr. STILLE, of Pennsylvania, offered the following:

Resolved, That in order to preserve the purity and honor of the medical profession, and to place around young practitioners an additional safe-guard against temptations to do wrong, as well as to draw a more distinct line of separation between true and false physicians, it is hereby recommended to the several Medical Colleges, and such other Boards as are by law authorized to examine candidates for admission into the medical profession, to require from every graduate or licentiate, his signature to the Code of Ethics of this Association, as well as to furnish him with a copy of the Code, and it is also recommended that the formal administration of a pledge, faithfully to observe and keep the same, form part of the public ceremonies of Medical Commencement.

After some discussion the whole subject was referred to a Committee of three, to report as soon as possible.

Dr. STEWART, on behalf of Committee of Arrangements, reported the names of delegates who had registered since last report, and recommending to invite Dr. HARVEY P. PEET, Institution for Deaf and Dumb, and Dr. W. C. BUTLER, to take seats in the Association. The report suggested that when the Society adjourn it be to Saturday morning. Accompanying, was a letter from Dr. THOS. SPENCER, presenting a paper on the atomic theory of life and vital heat, as applicable to Pathology.

On motion, Dr. SPENCER made a brief extract of his views.

Dr. BLATCHFORD, of New York, moved to have a resolution, offered previously, on the licensing power, with amendments by Dr. Garnett, taken up for consideration.

Dr. HOOKER, of Connecticut, spoke to the subject of the resolutions. He would expose individual cases, without referring to the Colleges or individuals by name. The object of such an Association as this, was not to be personal, but to reform abuses. Dr. H. cited several cases, for which he stated he had the best authority, in which young men had been allowed to graduate after terms of study under one year. Four of these cases were from schools very prominent in the community. If such instances as he had stated had come without inquiry, was it not probable that if a searching inquiry were instituted numerous such abuses would be discovered? The cause of this was in a great degreee owing to the competition between schools. He wished that the subject would be brought before a committee; and he thought the remedy proposed in Dr. Garnett's amendment would prove efficacious.

Dr. JOHNSON, of St. Louis, was happy the subject had come before this Association. He was sorry the gentleman had not given the instances he referred to; for he was confident that the Association was composed of gentlemen who would have an influence in preventing such abuses. In Missouri, they had memorialized the Legislature, and found that no hope for any measure to protect the Medical Faculty could be expected from the Legislature. This Association would, in itself have a much greater influence, by denying those scholars, who acted in the manner described, a place on this floor. The moral power of this Association, if exercised, would have the effect of keeping members of the profession from such practices.

Dr. ATLEE, of Pennsylvania, rose to prevent a discussion on the subject, which could lead to no practical good for the present. The evil was a very great one, and he hoped the whole subject would be referred to a committee to make their report at the next meeting.

The subject was referred to the following Committee:

Drs. Samuel Jackson, T. Blatchford, Johnson, of Missouri, and Peaslee, of New Hampshire.

On motion of Dr. ATLEE, the subject of proposed amendments to the Constitution was taken up, and the original articles, with proposed amendments, read by the Secretary.

Dr. STEVENS, of New York, moved an indefinite postponement of the whole subject of amendments to the Constitution.

Dr. ATKINSON, of Virginia, moved to have the amendment proposing to admit four delegates from the United States Army and United States Navy, excepted from motion to postpone.

Dr. COOLIDGE, of United States Army, hoped the Association would decide whether delegates from the Army and Navy were entitled to a seat on the same footing as other delegates. If the Association did not do so, he thought the Chief of the Army and Navy Medical Bureau would not be inclined to nominate delegates from that department, in future.

Dr. BOLTON, of Virginia, read some resolutions intrusted to him by

the Medical Society of Virginia, on the subject of amending the Constitution.

Dr. STEWART said the only alterations proposed were, in effect, to have one delegate from each College, and one from each hospital, instead of two. This was that they might obtain, as nearly as possible, a uniform representation of ten per cent., from all branches of the profession. Also the change respecting the Army and Navy delegates.

The question on indefinite postponement, excepting the clause altering the Constitution in relation to delegates from the Army and Navy, was put and carried, and the following adopted:

Resolved, That the second clause of Article 2 of the Constitution be so amended as to admit the American Medical Society in Paris to representation in this body upon the same terms as the Medical bodies in this country.

Dr. ALFRED STILLE, Chairman of the Committee to whom was referred sundry memorials touching the course to be pursued by Medical Colleges and other Boards in the examination of candidates and the granting of Diplomas reported, submitting the following resolution for adoption:

Resolved, That in order to preserve the purity and honor of the Medical Profession, and to place around young practitioners additional safeguards against temptations to do wrong, as well as to draw a more distinct line of separation between true and false physicians, it be and is hereby recommended, that every graduate in Medicine be required to subscribe a pledge to submit to the revocation of his diploma upon conviction of having knowingly violated the Code of Ethics of this Association. It is also recommended to the several Medical Colleges and such other Boards as are by law authorized to examine candidates for admission into the Medical Profession, to require from every graduate or licentiate his signature to the Code of Ethics of this Association, and to furnish him with a copy of the same. It is further recommended that the formal administration of a pledge faithfully to observe and keep the said Code form part of the public exercises of Medical Commencements.

The following form of Promise was among the documents referred to Committee on Pledge:

I, A. B., of ——, in the State of ———, do hereby promise, on the honor of a gentleman, that I will conform strictly with the Code of Ethics of this my Alma Mater in all things pertaining to the practice of my profession; and when I shall fail to do so, I hereby grant to the Faculty of said School full power and authority to withdraw said Diploma, and all the rights and privileges which it is intended to confer.

Dr. PALMER and other delegates opposed that part of the report proposing to clothe Colleges with the power of revoking diplomas for a breach of the "Code of Ethics."

Several motions and counter-motions were made. The Chairman decided on the right of the Committee to withdraw the objectionable resolution, when the second and third recommendations of the report were adopted.

Dr. PALMER moved the following, which was adopted:

Resolved, That the Standing Committee, of which Dr. Bolton is Chairman, be instructed to inquire into all cases of death that may be reported as occurring from the use of anæsthetic agents during the present year in the United States, and report to the next meeting of the Association.

Dr. ZIEGLER, of Pennsylvania, moved the following, which were laid on the table:

Resolved, That a Committee of three or more be appointed by the President, to devise or consider some comprehensive plan or system by which subjects connected more especially with Medical Science can be more speedily, systematically, generally and thoroughly investigated and examined.

Dr. BOLTON, of Va., gave notice that he would propose the amendments to the Constitution submitted to this Association by the meeting at Richmond, last year, and which have been here indefinitely postponed, for adoption at the next annual meeting in St. Louis.

Dr. J. M. SMITH, of New York, read the following

Report of Committee on Nominations.

The Committee on Nominations, in fulfilling the duty of their appointment, propose to continue most of the Special Committees appointed by the Association, in May, 1851, and May, 1852, and to appoint several new Special Committees, with the subjects to them committed:

1. Dr. D. F. CONDIE, of Philadelphia, Penn.—"On the Causes of Tubercular Disease."

2. Dr. JAMES JONES, of New Orleans, La.—"On the Mutual Relations of Yellow and Bilious Remittent Fever."

3. Dr. R. S. HOLMES, of St. Louis, Mo.—"On Epidemic Erysipelas."

4. Dr. GEO. B. WOOD, of Philadelphia, Penn.—"On Diseases of Parasitic Origin."

5. Dr. R. D. ARNOLD, of Savannah, Ga.—"On the Physiological Peculiarities and Diseases of Negroes."

6. Dr. JAMES R. WOOD, of New York—"On Statistics of the Operation for the removal of Stone in the Bladder."

7. Dr. F. PEYRE PORCHER, of Charleston, S. C.—"On Toxicological and Medicinal Properties of our Cryptogamic Plants."

8. Dr. GOODRICH A. WILSON, of Virginia—"On Cholera, and its Relation to Congestive Fever—their Analogy or Identity."

9. Dr. WORTHINGTON HOOKER, of Connecticut—"On Epidemics of New England and New York."

10. Dr. JOHN L. ATLEE, of Lancaster, Penn.—"On Epidemics of New Jersey, Pennsylvania, Delaware and Maryland."

11. Dr. D. G. CAIN, of Charleston, S. C.—"On Epidemics of Mississippi, Louisiana, Texas and Arkansas."

12. Dr. W. L. SUTTON, of Georgetown, Ky.—"On Epidemics of Tennessee and Kentucky."

13. Dr. THOMAS KEYBURN, of St. Louis, Mo.—"On Epidemics of Missouri, Illinois, Iowa, and Wisconsin."

14. Dr. GEORGE MENDENHALL, of Cincinnati, Ohio—"On Epidemics of Ohio, Indiana and Michigan."

15. Dr. E. D. FENNER, of New Orleans, La.—"On Epidemics of Mississippi, Louisiana, Texas and Arkansas."

16. Dr. CHAS. A. LEE, of New York—"On Domestic Hygiene."

17. Dr. DANIEL BRAINARD, of Chicago, Ill.—"On the Constitutional and Local Treatment of Carcinoma."

18. Dr. N. S. DAVIS, of Chicago, Ill.—"On the Influence of Local Circumstances on the Origin and Prevalence of Typhoid Fever."

19. Dr. GEO. ENGELMAN, of St. Louis, Mo.—"On the Influence of Geological Formation on the Character of Disease."

20. Dr. HENRY M. BULLITT, of Louisville, Ky.—"On the Use and Effect of Applications of Nitrate of Silver to the Throat, either in Local or General Disease."

21. Dr. ROBERT CAMPBELL, of Augusta, Ga.—"On the Pathogenic Influence of Feather Beds."

22. Dr. JAMES BOLTON, of Richmond, Va.—"On the Administration of Anæsthetic Agents during Parturition."

23. Dr. HENRY TAYLOR, of Mount Clemens, Mich.—"On Dysentery."

24. Dr. F. DONALDSON, of Baltimore, Md.—"On the Present and Prospective Value of the Microscope in Disease."

25. Dr. R. L. HOWARD, of Columbus, Ohio—"On the Pathology and Treatment of Scrofula."

Committee on Plans of Organization for State and County Societies.—Isaac Hays, M. D., of Pennsylvania, Chairman; Worthington Hooker, M. D., of Connecticut; Josiah Andrews, M. D., of Michigan; B. R. Wellford, M. D., of Virginia; A. L. Pierson, M. D., of Massachusetts.

Committee on Medical Literature.—T. S. Bell, M D., of Kentucky, Chairman; Samuel H. Pennington, M. D., of New Jersey; Ed. H. Parker, M. D., of New Hampshire; William K. Bowling, M. D., of Tennessee; Zina Pitcher, M. D. of Michigan.

Committee on Medical Education.—B. R. Wellford, M. D., of Virginia, Chairman; Resign Lowe, M. D., of Iowa; Lynden A. Smith, M. D., of New Jersey; Jacob Bigelow, M. D., of Massachusetts; L. A. Dugas, M. D., of Georgia.

Committee on Volunteer Communications—Drs. C. A. Pope, Thos. Reyburn, John S. Moore, J. B. Johnson and A. Litton, of St. Louis, Missouri.

Committee of Arrangements—Drs. J. R. Washington, J. S. Moore, S. Pollock, Thos. Reyburn, J. O. Farrar, W. M. McPheeters, C. W. Hempstead and E. S. Lemoine, of St. Louis, Mo.

Committee on Publications—Dr. D. V. Condie, Pennsylvania, Chairman; Dr. E. L. Beadle, of New York; Dr. A. Stillé, Pennsylvania; Dr. J. Hays, Pennsylvania; Dr. E. S. Lemoine, of Missouri; Dr. G. Emerson, Pennsylvania; Dr. G. W. Norris, Pennsylvania.

Dr. ATLEE, of Pennsylvania, moved that when the meeting adjourn, it adjourn to meet at 9 o'clock on Saturday morning.

The motion was withdrawn.

Dr. ROGERS, of Philadelphia, moved to have the report and resolutions offered by Dr. Zeigler, and laid on the table, taken up.

The report and resolutions were referred to a Committee, consisting of Drs. Zeigler, Rogers and Jackson.

Drs. ATLEE and MILLENBERGER offered the following, which was adopted:

Resolved, That the cordial thanks of the American Medical Association be, and they are hereby tendered to the Committee of Arrangement, the Trustees of the Church in which they have held their meetings, the profession and the citizens generally of New York, for the generous and elegant hospitality extended towards its members during its present session.

Dr. BOLTON, proposed a vote of thanks to the Presidents of the public Institutions, which had been thrown open for members of the Association during their stay.

Dr. BOLTON, of Virginia, moved the thanks of the Association to the Press of this City, for its accurate report of their proceedings.

On motion, it was resolved to meet on board the steamboat, at foot of Pier No. 3, this morning at 9 o'clock, and proceed to visit the public institutions belonging to the City of New York.

The President congratulated members on the close of their deliberations, and expressed his wish that they should all meet at St. Louis next year.

The Association then adjourned *sine die*.

THE NORWALK CATASTROPHE—MEETING OF THE MEDICAL ASSOCIATION.

A meeting of delegates to the late Medical Convention, still remaining in New York, was held yesterday morning at the Bleecker Street Church, corner of Bleecker and Crosby Streets, for the purpose of expressing the feelings of the Association on the loss of several members of that body by the railway catastrophe at Norwalk. Dr. Joseph M. Smith was appointed President of the meeting, and Dr. E. L. Beadle officiated as Secretary. On motion of Dr. Rockwell, a Committee was appointed to prepare suitable resolutions for the occasion. The following gentlemen formed the Committee: J. H. Griscom, N. Y.; S. Hanbury Smith, Ohio; P. Claiborne Gooch, Va.; L. A. Smith, N. J.; Theodore Goodloe, Ala.; R. La Roche, Pa.; John Watson, N. Y.

The following preamble and resolutions were read by J. H. Griscom, M. D.

Whereas, amid the wide-spread affliction caused by the recent catastrophe at Norwalk, the members of the American Medical Association, recognizing in this mournful event the hand of an all-wise Providence, feel called upon to express their grief at the sudden removal from life of Abel L. Pierson, M. D., of Salem, Mass; Alexander Welch, M. D., of Hartford, Conn.; Josiah Bartlett, M. D., of Stratham, N. H.; Samuel Beach, M. D., of Bridgeport, Conn.; James M. Smith, M. D., and J.

H. Gray, M. D., of Springfield, Mass., late members of the Association:* And, *whereas*, it is the earnest desire of the members, still present in the City of New York, to record a suitable expression of their feelings upon an occasion equally unprecedented and distressing; therefore,

Resolved, That the members have received with profound sorrow the lamentable intelligence of the loss which the community, as well as the profession, have sustained, by the death of so large a number of the American Medical Association.

Resolved, That as a suitable, though inadequate, external mark of their grief at the sudden demise of friends from whom they had so recently parted, the members of the Association in general are recommended to wear the usual badge of mourning for the space of thirty days.

Resolved, That a Committee of five be appointed to devise some suitable method of commemorating the event, and the worth and professional character of our lamented associates, and recommend their plan at the next meeting of the Association.

Resolved, That the members of the Association deeply sympathize with the relatives of the deceased, and that a copy of these resolutions, duly authenticated, be transmitted to their respective families.

The resolutions were adopted by the meeting, and a Committee was appointed to consider the best method of providing some memorial in commemoration of the terrible disaster. The names of this Committee were Joseph M. Smith, M. D., F. C. Stewart, M. D., J. W. G. Clements, M. D., W. Rockwell, M. D., Isaac E. Taylor, M. D., E. L. Beadle, M. D. and John Watson, M. D.

The report of this Committee will be delivered at the next meeting of the Medical Association, which will take place next year, in St. Louis. —*N. J. Med. Reporter.*

PROCEEDINGS OF THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA,

At its Annual Session, May, 1858.

Pursuant to the Resolution passed at the last Session, the State Medical Society of Pennsylvania assembled in Philadelphia, on Wednesday 25th of May, 1858, at Sansom Street Hall, the place designated by the Committee of Arrangement of the Philadelphia County Delegation.

The President, Dr. Hiram Corson, of Montgomery, called the Society to order, and stated that the first business would be the appointment of a Committee to examine and verify the Credentials of the Delegates. Drs. Wilson Jewell, of Philadelphia, J. Bernard Luden, of Huntingdon, and Patrick Cassidy, of Lancaster, were appointed this committee, who, after some time, reported that they had examined the credentials submitted, and found them duly authenticated, with the exception of those from Delaware, which were not dated.

Dr. R. K. Smith, of Delaware, stated that correctly dated credentials

* Among the killed was Dr. Wm. C. Dwight, of Brooklyn, N. Y., who was probably not a member of the Association.—*Ed. N. J. Medical Reporter.*

were incorporated in the Report of the Delaware County Medical Society, and that the date had been inadvertently omitted in the certificate handed in.

Dr. Jewell mentioned that a communication had been presented to the Committee on Credentials from the Mifflin County Medical Society, appointing Drs. Ard and Rothrock delegates to the State Society, but the communication was not signed by the President or Secretary of the Mifflin County Society.

On motion of Dr. H. S. Patterson, of Philadelphia, the communication was received and the delegates were acknowledged.

The following are the delegates whose credentials were presented. [Those marked * were absent during the session.]

Alleghany—Drs. John Dickson,* Wm. M. Gray,* John Pollock,* T. W. Shaw,* T. J. Gallaher,* Chas. F. Williams,* George McCook,* Wm. M. Herron,* Daniel McNeal,* John Wilson.*

Berks—Drs. John P. Hiester, Wm. Herbst,* C. H. Wanner, J. Seiberling, *Martin Luther, F. M. Hiester.

Bradford—Dr. George F. Horton.

Blair—Drs. James Coffey,* J. M. Confer.

Bucks—Drs. Ralph Lee,* Isaac Newton Evans, Samuel Thompson, Charles W. Smith,* Samuel Scott,* James S. Rich.*

Cambria—Drs. John Lowman,* James L. How.*

Chester—Drs. Wilmer Worthington, Isaac R. Walker, Samuel H. Harry, Septimus A. Ogier, J. P. Edge, Jacob Price, Charles W. Parrish,* Edward F. Rivinus,* W. D. Hartman,* J. H. Bradford.*

Delaware—Drs. R. K. Smith, C. J. Morton, J. Owen, Geo Martin, C. Ash.

Erie—Drs. W. Poyntell Johnson,* W. B. Williams,* Llandaff Strong,* H. A. Spencer.*

Huntingdon—Drs. J. B. Luden, J. M. Gemmill, J. A. Shade,* G. H. Winterode.*

Lancaster—Drs. Francis S. Burrowes, Emanuel S. Baer, J. L. Zeigler,* J. L. Atlee, George Hoover, Thomas Ellmaker, Benjamin Rohrer,* Henry Carpenter, Benjamin Musser,* J. Augustus Ehler,* Patrick Cassiday, Ely Parry, M. A. Withers, J. Gibbons.

Lycoming—Drs. Thomas Wood, James Rankin.

Mifflin—Drs. B. Ard,* A. Rothrock.

Montgomery—Drs. John Schrack, Benj. Johnson,* William Corson, Geo. W. Wimley, E. K. Beaver, F. P. Poley, H. S. Jacoby,* Henry Geiger, Hiram Corson.

Northampton—Dr. Samuel Sandt.

Philadelphia—Drs. Wm. Ashmead, John B. Biddle, Henry Bond, Thomas F. Betton, J. R. Bryan, Chas. F. Bibighaus, Benj. H. Coates, Joseph Carson, D. Francis Condie, Wm. Darrach, Gouv. Emerson, James V. Emlen, George Fox, Paul B. Goddard, David Gilbert, Edward Hallowell, S. L. Hollingsworth,* Isaac Hays, N. L. Hatfield, Samuel Jackson, Wilson Jewell, E. Janvier,* Alf. L. Kennody, Wm. H. Klapp, W. L. Knight, John P. Lamb, R. J. Levis, William Mayburry, John K. Mitchell, George W. Norris, Arnold Naudain,* Henry S. Patterson, Lewis Rodman, Neville C. Reid, Moses B. Smith, A. E.

Stocker, Laurence Turnbull, Francis West, Joseph Warrington, Thos. S. Yardley, J. V. Patterson,* John M. Pugh.

Schuylkill—Drs. Enos Chichester, John G. Koehler, B. F. Shannon, James S. Carpenter, Charles M. Steinberger, George Halberstadt, Jacob F. Treichler.

Susquehanna—Drs. B. Richardson,* E. L. Park.*

On motion of Dr. Condie, of Philadelphia, the reading of the minutes of the last session was dispensed with.

On motion of Dr. Lamb, of Philadelphia, the minutes of the last session were referred to a Committee, with a view to bring before the Society any unfinished business from the last session. Drs. Mayburry, of Philadelphia, Worthington, of Chester, and Lamb were appointed this Committee.

The President now read the Annual Address, prepared by him in pursuance of a resolution of the last session. He commenced by a feeling allusion to the death of a prominent member of the Society, Dr. Isaac Parrish, who was well remembered as an active participator in the proceedings of the last and every previous meeting of the Society, and who had a few months since been removed by death. Dr. Corson proceeded to descant upon the objects which had been aimed at and accomplished in the formation of the Society. To effect a thorough organization of the profession of the State, was one great object which had brought them together. But, they had also higher and nobler objects than mere self-aggrandizement,—the improvement of medical science, by bringing together the stores of facts and observations which were collected from year to year. He alluded in complimentary terms to the advantages to be derived by the physicians from the country in their intercourse with the profession and medical institutions of Philadelphia, while they from the country brought in their accounts of the diseases and epidemics as they prevailed in their respective localities, with reference to the geological formations, meteorological conditions, habits of life, and other circumstances under which they occurred. They might perhaps be enabled to present some valuable data of the modifications of the disease which prevailed in our State in the mining, the manufacturing, and the agricultural districts.

Dr. Corson next turned to the effects of the various forms of quackery, prevailing in our midst, on the advancement of medical science. He thought that, perhaps, we might learn something indirectly from each of them.

Passing to the subject of medical education, Dr. Corson dwelt with considerable emphasis on the neglect of chemistry in the curriculum of medical studies, and on its high importance to medical science. It was comparatively slighted in our medical schools, and he coincided with an opinion expressed by Prof. Hare, at the meeting of the American Medical Association, in 1847, that no student should receive a diploma without the vote of the Professor of Chemistry.

Dr. Corson thought it would be much better to ask the Medical Colleges to insist upon a knowledge of chemistry as essential to graduation, than to require private practitioners to shut their office-doors upon those

youths who were anxious to enter upon the study of medicine, but were ignorant of Latin and Greek. If we asked for too high a standard of preliminary education, we might exclude youths of genius and ennobling qualities, who had not had the advantages of superior early education—such self-made men as Franklin, Rittenhouse, Velpeau, and the elder Parrish.

On the subject of the County Medical Reports, Dr. Corson expressed a wish that attention might be turned to the use and abuse of some of the mineral medicines. He paid his respects rather pointedly to mercury, and hoped that future reports from the County Medical Societies would take up this subject, and give them information as to the diseases in which mercurials were essential, and those which were curable without them.

Dr. Corson concluded his address with some very strong remarks on the employment of alcoholic liquors by medical men. He was not only severe in his denunciation of their dietetic and social use, but he took the ground that "alcoholic stimulants are unnecessary in the treatment of any disease."

On the termination of Dr. Corson's address, Dr. H. Carpenter, of Lancaster, moved that the thanks of the Society be tendered to Dr. Corson for his eloquent address, just delivered, and that a copy be requested for publication.

Dr. Jewell could not vote for this resolution, if the sentiments contained in the Address were to go abroad as those of the Society. There was no more decided temperance man than he, but he was not prepared to sanction the opinion that we can dispense entirely with the use of alcoholic stimuli in the treatment of disease. He thought Dr. Corson's views ultra. He could not support the printing of the address as it had been delivered.

Dr. H. S. Patterson did not consider the Society in any way committed to the views of the Address.

And Dr. H. Carpenter, in moving to print the Address, had no idea of expressing any endorsement of the opinions advanced in it.

The resolution was adopted.

Dr. West, of Philadelphia, presented his report as Treasurer of the Society.

On motion of Dr. Condie, it was referred for examination to a Committee, consisting of Drs. Burrowes, of Lancaster, Wood, of Lycoming, and Bibighaus, of Philadelphia.

Dr. Condie presented the report of the Committee of Publication. 750 copies of the Transactions of last year had been printed, of which 500 had been sent to County Societies, and 136 disposed of, and sent to journals, &c.; making in all 636 distributed, and leaving 114 on hand. The publication had cost $305, other expenses $3.62; making an entire cost of $308.62. From County Societies $145 had been received; from the Treasurer $135.97; from Dr. Innes, for extra copies, $5; from Dr. La Roche, for the same, $1. A balance of $21.62½ remained due the Committee of Publication. The assessments from the counties of Huntingdon, Lebanon, Lycoming, Mifflin, Perry and Susquehanna, ($35)

had not been received. He was told, though, that the Huntingdon county assessment was here and would be handed in, and also that there was a letter in the Post Office containing that from Susquehanna.

On motion of Dr. Condie, the Commtttee on Publication was authorized to draw on the Treasurer for $21.62½.

On motion of Dr. Condie, it was resolved that the daily meetings of the Society shall be from 10 A. M. to 1 P. M., and from 4 to 6 P. M.

Dr. West extended an invitation to the Society to visit the Mint tomorrow morning at 9 A. M.

On motion of Dr. Atlee, of Lancaster, Dr. Burnell, of Massachusetts, was invited to a seat on the floor.

On motion of Dr. Jackson, of Philadelphia, Dr. Spencer, of Syracuse, was invited to a seat on the floor.

Dr. Beaver, of Montgomery, moved that Dr. Geiger be admitted as a substitute for five of the Montgomery county Delegation, who were absent.

Dr. Lamb asked if Dr. Geiger was a resident of Montgomery. And, it being stated that Dr. Geiger was a resident of Philadelphia, Dr. Fox, of Philadelphia, thought it not proper that he should represent Montgomery.

Dr. R. K. Smith, of Delaware, wished the question settled, if a county can be represented by a delegate not residing therein, also, if, when a member of a County Society moves out of a County, his association with the County Society is not dissolved. The Delaware county Medical Society desired information on this point.

Some discussion took place on this question, and finally, on motion of Dr. Condie, the subject was referred to a Committee, to report at the afternoon session. Drs. Condie, Koehler, of Schuylkill Haven, and Maybury were appointed this Committee.

On motion the Society adjourned.

Afternoon Session.

The President called the Society to order at 4 P. M.

The President presented the acknowledgment of the Society of the State of New York for the Transactions of the Pennsylvania State Society, and also the Transactions of the Medical Society of the State of New York.

The roll was now called. The minutes were read and approved.

Dr. Jewell reported that Dr. Samual Sand had been appointed a delegate from Northampton County Medical Society, in place of Dr. C. C. Field.

Dr. Jewell reported that Dr. Henry Geiger had been appointed a delegate as substitute for Dr. McEuen, from Montgomery county.

Dr. Jewell reported that Dr. Confer, from Blair county, had been appointed a delegate from that county. He had been in the city a week, and his credentials had not reached him.

On motion of Dr. Worthington, Dr. Confer was admitted a delegate from Blair.

Dr. Warrington asked, with reference to the assessment, if the ex-

penses of the State Medical Society, independently of the accommodations here, were not to be borne by the County Medical Societies *pro rata* to the number of delegates.

Dr. Warrington moved a resolution to this effect.

Dr. Worthington, of Chester, seconded the motion.

Dr. Condie said, that unless delegates now came forward and paid an assessment, the publication of the Transactions would be delayed. The County Societies were backward in paying their contributions because many of them met so seldom. The assessment now to be levied would meet the more urgent pecuniary demands to be made on the Publication Committee, while the contributions of the County Medical Societies would complete the demand.

Dr. Warrington thought that the principle of throwing the burden of these expenses on the delegates was unjust, and he hoped the practice would now be established of making the County Societies bear this expense.

Dr. Patterson read the article of the Constitution providing that County Societies pay the expenses of publication according to their ratio of representation. The State Society to fix the rate of assessment.

Dr. Warrington moved that a Committee be appointed to fix the rate.

Dr. Condie thought it was impossible that a Committee could make in advance a rate of assessment which would be proper, as they could not tell what would be the cost of the Transactions. He thought it better that the delegates should pay an assessment now, and collect it afterwards from the County Societies. He moved the assessment be $2 on each of the delegates.

Dr. Atlee begged leave to say a word. He thought Dr. Condie's opinion, from his long experience in publication, entitled to great deference. But he must still deem it unjust that delegates who came here at their own expense, should be taxed for the cost of the Transactions in addition. They were besides to be taxed in their own Societies *pro rata*. Lancaster county sent a large delegation, who would be all taxed here, and then taxed *pro rata* in their County Societies. Thus a large delegation is most largely taxed. The more zeal shown in a county, the more the pecuniary burthen.

Dr. Warrington reiterated his views, which were that the County Societies be taxed according to the number of delegates to which they are entitled, whether sent or not.

Dr. Fox thought that this was all provided for by the Constitution. All monies should be received and distributed by the Treasurer. He had resigned the office of Treasurer because this had not been done. The Chairman of the Committee of Publication had received and paid out money without previously handing it to the Treasurer. The proper mode was for County Societies to hand over to the Treasurer the money they collect, and then for the Committee of Publication to draw on the Treasurer.

Dr. Worthington thought it would be proper for the Treasurer or the Chairman of the Committee on Publication to make an assessment on County Societies, when the cost of publication was known, and he was

sure the amount called for at once would be transmitted to the Treasurer. Treasurer and Publication Committee would confer together and fix ratio and assessment. County Societies were bound to return lists of their members. He moved the Treasurer make assessment on County Societies, *pro rata* for representation. Let them know what it is and have it transmitted.

Dr. Burrowes, of Lancaster, thought the Publication Committee could not go on without funds in hand. It would be better to get some money now from delegates.

Dr. Worthington's motion was now carried.

Dr. Condie, from the Committee to whom was referred the question whether members of County Societies, moving out of the County, forfeit their membership, reported: According to a strict construction of the Constitution this would be the result; but it would defeat the object of bringing within the organization of the profession every member in good standing. A physician may move to a place where there is no Society, or some time may elapse before he can connect himself with the Society where he has moved, or he may be nearer the place of meeting of an adjoining county than his own. The Committee recommend a certain latitude to county Societies as regards these cases. They recommend that physicians moving into another county, in good standing, be received into the Society of the county where they move, on certificate from county left.

Dr. Atlee said the rule in Lancaster county is to strike from the roll all who move permanently from the county. He thought it a good rule. To change it would be to reverse one of the great principles on which the State Medical Society was founded, viz. the organization of the profession. The County Societies should be entitled only to representation on their resident members. If a man goes to a county where there is no Society, let him go to work and organize a Society.

Dr. Atlee moved to recommit the report.

Dr. Worthington moved that the report be laid on the table, and that it be

Resolved, That the Society adheres to a strict construction of the Article of the Constitution which confines membership of County Societies to residents within the County. Carried.

Dr. Condie now moved that the State Society recommend to the County Societies to incorporate within their by-laws an article admitting members from other counties on a certificate from the county which they leave.

Dr. Worthington objected to this, as defeating the free action of the County Societies, and fettering them. Each Society could regulate its own membership.

Dr. Atlee moved to amend Dr. Condie's motion by making a man who removes merely *eligible* without a year's residence, but still let him be ballotted for.

Dr. Jackson opposed Dr. Condie's resolution.

Dr. H. Carpenter moved that Dr. Condie's resolution be laid on the table. Carried—24 to 20.

Dr. John P. Heister, of Reading, from Berks County Medical Society, laid before the Society the following report and resolutions on adulterated drugs, from Berks County Medical Society:

"After carefully considering the able and valuable reports made by the different Committees on adulterated drugs, appointed by the Medical Association, your Committee would respectfully suggest that there appears to be still a considerable want of system in the modes proposed, of abating or abolishing the serious evil of the manufacture and sale of spurious drugs, so loudly and justly complained of. The nearest approach to a feasible, and in the opinion of your Committee, effectual plan, is that suggested by Dr. R. M. Huston, and reported in the Transactions of the Association for 1851.

On an attentive review of the whole subject, being deeply impressed with its great importance, and aided and guided by the valuable suggestions contained in the reports of the Committees of the Association above referred to, your Committee would most respectfully submit the following resolutions, to be taken up by your delegates to the next session of the State Medical Society for its consideration:

1. *Resolved,* That the County or local Societies of this State be urgently requested to appoint annually committees to collect samples of drugs from dealers and manufacturers, in their respective districts, to be presented to the State Medical Society at their annual sessions.

2. *Resolved,* That the Medical Society of the State of Pennsylvania appoint annually a Committee of three to take charge of the said samples, and it shall be their duty to employ a competent assayer of drugs to examine the same, and give an opinion on their purity and quality, and this opinion shall be presented to the Society for publication in their Transactions.

3. *Resolved,* That the amount of expense incurred by the Committee in carrying into effect the above resolutions, shall be assessed and collected in like manner as is assessed and collected the amount for defraying the expenses for publishing the Transactions.

Dr. Heister advocated these resolutions at some length.

Dr. Parry, of Lancaster, thought the plan expensive and impracticable.

Dr. Turnbull, of Philadelphia, expressed the same views.

On motion of Dr. Biddle, of Philadelphia, the resolutions were referred to a Committee to inquire into the expediency and practicability of carrying out the suggestions embodied in the Berks County resolutions, and to report to the next session of the Society. Drs. Biddle, Parry and Carson, of Philadelphia, were appointed this Committee.

The President presented an invitation from the Academy of Natural Sciences to visit their Hall at any hour designated by the Society.

The invitation was accepted for Friday afternoon at 3.

Dr. H. Carpenter moved that a committee of one delegate from each county be appointed to nominate officers for the ensuing year. Carried.

Dr. Condie moved that the order of the day for to-morrow, immediately after reading the minutes, be Reports from County Societies. The nominating Committee appointed, consisted of—

Dr. H. Carpenter,	. . .	Lancaster,
" C. H. Warner,	. . .	Berks,
" G. F. Horton,	. . .	Bradford,
" Isaac Newton Evans,	. .	Bucks,
" Isaac R. Walker,	. . .	Chester,
" R. H. Smith,	. . .	Delaware,
" J. D. Luden,	. . .	Huntingdon,
" Thomas Wood,	. . .	Lycoming,
" A. Rothrock,	. . .	Mifflin,
" J. W. Wimley,	. . .	Montgomery,
" Samuel Sands,	. . .	Northampton.
" D. Gilbert,	. . . .	Philadelphia,
" John G. Koehler,	. . .	Schuylkill,
		Susquehanna.

Dr. Burrowes, from the Committee to audit the Treasurer's account, reported that they examined and found it correct. Report accepted.

The hour of adjournment now arrived.

Thursday—Second day—26th of May.

The Society was called to order by the President at 10 o'clock A. M. The roll was called, and the minutes read and approved.

Reports from County Societies being in order, the Report of Sanitary Committee of the Medical Society of the City of Reading of the County of Berks, for 1853, was presented and read by one of the Secretaries. A prevalence of typhoid fever and a typhoid tendency in diseases generally, an epidemic of parotiditis in a district of the county, were among the most noticeable points in this report.

Dr. Wm. Gries, Chairman of the Committee, expressed an unfavorable opinion of the use of alkaline and saline preparations, where an hemorrhagic tendency prevails in typhoid fever. His experience was also decidedly against the general use of alcoholic stimulants in this epidemic. He found the use of aromatic sulphuric acid very advantageous, both in restraining the hemorrhagic tendency and alvine discharges, and in supporting the patients. The sulphate of quinia, which Dr. Gries had in previous epidemics employed with advantage, he derived no advantage from in this, except in the declining stages of the fever, when it occasionally presented something of an intermittent character.

The Report from the Chester County Medical Society was next read. The report was necessarily brief, it was stated by Dr. C. W. Parrish, chairman, as only five communications had been received, and none intimated the prevalence of any general epidemic. The physicians from whom communications had been received, were Drs. Worthington, Hartman and Price, of West Chester, Edge, of Downingtown, and Pennypacker, of Phœnixville. Dr. Edge, of the Chester Valley, reported the occurrence of numerous cases of typhoid fever in his district.

He thought the disease had been clearly communicated from patient to patient. Its appearance in Uwchlan, north of the Valley, was trace-

able to the scattering of the pupils of a boarding school, where the fever had prevailed. Dr. Edge himself felt the effects of the disease in increased languor, &c., for two weeks.

Dr. Hartman reported several cases of dysentery in the mica slate ridge, the same district in which it occurred in 1851. He had tried the nitrate of silver, and his experience was quite unfavorable as regards its effects.

Drs. Worthington, Pennypacker, Price and Hartman, all referred to a disease, as prevailing from last of January to last of spring months, which was probably influenza, although catarrhal symptoms were not prominent. Dr. Pennypacker found sulphate of quinia very useful in managing it. Dr. Worthington had treated it by evacuants very successfully.

A few cases of erysipelas, cholera morbus, cholera infantum, rubeola, &c., were recorded. Pertussis had occurred epidemically in certain districts.

Dr. Pennypacker had met with an unusual number of cases of acute rheumatism, some of them of great violence.

This Report and the preceding were referred to the Committee on Publication.

An invitation to visit the Academy of Fine Arts was now presented, and accepted for one o'clock to-day.

An invitation from Rev. Dr. Ducachet, of St. Stephen's Church, to visit the Statuary in that Church was received, and one o'clock on Friday was fixed for accepting the invitation.

The Secretary now read the Report from the Schuylkill county Medical Society. Dr. James S. Carpenter, the Chairman, stated that he had received no communications from the physicians of the county. No epidemics had prevailed in the county. Since the occurrence of the great flood of 1850 in the Schuylkill and its tributaries, a marked diminution in the occurrences of miasmatic fevers had been noticed. A few cases of typhoid fever had been observed, traceable, according to Dr. Carpenter's views, to defective drainage. He had used sulphate of quinia and nux vomica with good effect. A tendeney to cerebro-spinal meningitis had been noticed. In the treatment of dysentery he had used tincture of chloride of iron with much success. In scarlatina, he had used inunction in conjunction with chlorate of potassa internally, with very striking advantage.

Dr. Carpenter mentioned two cases of strangulated hernia, in which, after every known means of reduction had been attempted, the bowels was readily and promptly reduced by inhalation with *chloroform*.

The influence of *altitude* upon disease Dr. Carpenter briefly alluded to. He stated, that within certain limits, elevation of situation and the consequent rarefaction of the atmosphere, he believed to be conducive to a healthy condition of the lungs. Dr. Carpenter intimated an intention on the part of the Schuylkill County Medical Society to devote more attention to this subject in a future report.

Report referred to Committee of Publication.

Dr. R. K. Smith now read the sanitary report of the Delaware County

Medical Society. Scarlatina, rubeola, variola, dysentery, miasmatic fevers, cutaneous and rheumatic fevers had been the prevalent diseases. It was observed that the districts affected with miasmatic fever were exempted from dysentery; and also that the districts affected this year with dysentery had been exempt the year before. Dysentery had taken a very malignant and fatal form in the onset of the epidemic. Geological formation appeared to exercise very little influence over it. As regards treatment, calomel and opium, or some other form of mercury, castor oil, laxatives, (more or less frequently) with laudanum or oil of turpentine, acetate of lead and ipecacuanha, with opium, were found of great value; Hope's mixture, anodyne and astringent enemata, were also resorted to by many. 28 cases and 2 deaths, and 30 cases and no deaths, are the numbers recorded in two reports.

Dr. Smith stated that the physicians of the northern portion of the County had not responded to the circular issued, and were consequently unrepresented in the report.

Dr. H. Carpenter read the Report of the Lancaster County Medical Society. This report contained an elaborate and interesting geographical, geological and statistical description of the County. The report was accompanied by a chart. As regards diseases of past year, but little is to be offered, it being a period of unusual health; and only one communication was received in reply to the circulars issued. Dysentery had been most prevalent in slaty or primary districts. The surrounding country was entirely exempt. As regards non-prevalence of dysentery in limestone regions, mentioned in last year's reports of several Counties, the Lancaster County Report cannot concur. The dysenteric epidemic appeared to be of a miasmatic origin, and required a corresponding treatment. Total number of practitioners in the County 155; graduates 102; non-graduates 28; total regular practitioners 130.

This Report was also referred to Committee on Publication.

The Report from Blair County was read by the Secretary. Only two reports had been received in this County, besides those furnished by members of the Committee. The Committee commented upon the negligence thus evinced.

Rubeola, scarlatina, variola, varicella and varioloid, typhoid fever, and dysentery, were the diseases noticed, with a remarkable absence of ordinary, acute and inflammatory fevers, and miasmatic diseases. The past year had been one of general health. The Report furnished very interesting and full details of the various diseases which had been noticed. Drs. Confer, Ross, and others, contributed voluminous reports to the Blair Co. Society. Dr. Landis of ——— county, was attacked by typhoid fever, from exposure, fatigue &c., incident to his duties among his patients with that disease. The writer denies the contagious character of the disease—its production owing to deliberating agents generally—believes it to be epidemic—has never seen a case where ventilation and other preventive measures were fairly used. Has met with more obstinate cases of neuralgia during past year than he can recollect of previously—has on the whole been a year above the average state of health. Topographical and Geological reports will be made in

another year. Medical Society in existence seven years—held four meetings in 1852—Drs. Coffee and Confer, a committee to prepare reports for 1852—officers—members—named—referred.

Report of Mifflin co. read by Dr. Rothrock; County has been unusually healthy—sporadic cases tending to typhoid type; typhoid pneumonia rather common—some sporadic cases of dysentery—(reading here suspended—some of the manuscript being mislaid—to be resumed when found.)

Huntingdon co. Report read by Dr. Luden. Has also enjoyed unusually good health. Rubeola, varicella, the only epidemic during past year still prevails at close of year, mostly in the borough of Huntingdon. Writer believes typhoid fever communicable by contagion—mortality from said fever during this year about 9 per cent.; prevailing mostly upon the slaty and wet districts. Dr. Miller reports cases of dysentery, mostly upon the slaty formation; yet some very severe ones occurring on the limestone formation. The cases of intermittent, and remittent, less than other years. Neuralgia of every variety more frequent than of late years. Small pox prevailed to some degree; mortality about 7 per cent. Anthrax, furunculi, &c., very common. Inflammatory disease of respiratory organs rather numerous during the winter months; some putting on the typhoid type. Referred to committee of publication.

Dr. Atlee of Lancaster, Chairman of committee of epidemics of Pennsylvania, New Jersey, Maryland, of the National Medical Association, read a communication on the subject, calling the attention of the members to the subject, and urging the members to make observations and communicate them to him. Referred to the committee of publication, to be published with the minutes. On motion adjourned.

Afternoon Session.

The President called the Society to order at 4 o'clock, P. M. Roll called. Minutes read and approved.

A communication, read before Huntingdon County Medical Society, on Small-Pox, Vaccination, and Varioloid, by Dr. Gemmill, was presented as an appendix to Huntingdon county report. It was read, and referred to Committee on Publication.

Dr. Condie stated that, owing to the ill health of the Chairman of the Committee of the Philadelphia County Medical Society, Dr. H. S. Patterson, the report from Philadelphia county was not prepared. He moved, that if ready before the publication of the transactions, it be included in them.

The report of the Susquehanna County Medical Society was prepared by Dr. Latham, chairman, which was presented and read. It contained a topographical and geological description of the county, and a brief sketch of the diseases which had prevailed during the past year. The general health of the county had been remarkably good, and nothing worthy of especial notice had occurred, except an epidemic of a mild form of scarlatina. Referred to Committee of Publication.

Dr. Jewell extended an invitation to the Society from the Philadelphia delegation, to an entertainment to be given in the hall this evening.

On motion adjourned to visit Girard College.

Third day—Friday—27th of May.

The President called the Society to order at 11 o'clock.

Dr. Cassiday, from the Committee on Credentials, reported those of Cambria county delegates correct.

The minutes of the last meeting were read and approved.

Dr. Maybury, from the Committee on Unfinished Business of the last session, reported.

On motion of Dr. Patterson, the report was accepted. The Committee was continued, and the committees named in the report were called on for their respective reports.

Drs. Carpenter and Hulberstadt, of Schuylkill, extended an invitation to the Society to hold its next meeting at Pottsville.

On motion of Dr. Condie, it was resolved that the next meeting of the Society be held at Pottsville.

The report of the Cambria County Medical Society was read and referred.

The report of the Montgomery County Medical Society was now read. It presented a very full and interesting account of the diseases observed in this county, with full details of the treatment employed. Dr. H. Geiger was the Chairman of this Committee.

The report of the Bucks County Medical Society was now read. No regular report was made, but an account was submitted of epidemics which prevailed in the county some years ago, which they asked to be referred to the Committee of Publication, with discretionary power to print the whole or part.

Dr. Walker, of Chester, offered the following resolution, which was adopted:

Resolved, That it be the duty of the Recording Secretaries to transmit to the Chairman of the Committee of Arrangements of the "National Medical Association," a correct list of the delegates from this Society, so that it may be received at least one week previous to the meeting of said Association. Also, that the Secretaries shall supply each delegate with a certificate of his appointment.

Dr. West offered the following resolution, which was adopted:

Resolved, That the Committee of Publication be instructed to prefix to the forthcoming volume of the transactions of this Society, a note, or statement, that the Medical Society of the State of Pennsylvania does not endorse or sanction the facts or opinions contained in any address or report which may be made to them, or published by their authority.

Dr. R. K. Smith offered the following resolution:

Resolved, That each Medical Society be requested to furnish with their reports a synopsis of their contents, and that the reports be read by their titles, with the synopsis of their contents, and referred to the Committee of Publication.

Dr. Warrington, of Philadelphia, was opposed to the indiscriminate publication of the reports coming from various quarters. He thought that the right of selection, condensation, curtailment, or rejection, should be vested in the Committee of Publication, with reference to reports.

Dr. Condie said this Society was not organized as a censorship over men's minds or their productions. He wished every man to present his facts and views in his own way. The object of the Society had been to rouse up the dormant energies of the profession of the State, and he thought it would be very unwise to reject the materials furnished in the reports because men might take exception to portions of them. How many differences of opinion existed in every branch of medicine—physiology for instance? Who should undertake to say what was correct and what was not? Freedom of mind was essential to the advancement of science. The moment you undertake to trim and curtail the reports you will cease to receive reports. He was for receiving all the reports and printing them as they were received, while it would be stated in the Transactions that the Society in no way endorsed or sanctioned the opinions and facts presented in them. He felt that the Medical Society of Pennsylvania might be proud of their transactions as already published.

Dr. R. K. Smith thought the resolution of Dr. West, just passed, met every objection that might be felt to opinions advanced in reports. He was opposed to any curtailment or alteration in the reports.

Dr. Emerson, of Philadelphia, wished that the reports should always be accompanied by abstracts, not exceeding eight foolscap pages, which should be read in place of the reports, unless they were of unusual interest. He moved, as an amendment to Dr. Smith's resolution, that each report be accompanied by a synopsis not exceeding eight post pages.

Dr. Geiger, of Montgomery, concurred in the views expressed by Dr. Warrington. He thought there was a great deal of lumber in the reports—matter to be found in all the text books, or copied from Rogers' Geological Manual—that they should not be at the expense of publishing.

Dr. Jackson said that there had not been a medical book published since the days of Hippocrates, that did not contain the lumber alluded to by the gentleman who spoke last. He did not feel the force of his objections.

Dr. Hays thought we might legislate too much. He thought it unwise to put upon the county Societies the additional labor of furnishing abstracts, and, besides, he considered it disrespectful to ask the county Societies to make reports, and then to decline to read them in full.

Dr. Corson took the floor, and expressed himself strongly opposed to any interference with the reading of the reports in full. He believed that they were doing incalculable good in rousing the energies of the heretofore isolated country practitioners, in teaching them to think and judge for themselves, and to throw off the trammels of the teachers whose opinions and dogmata, however valuable, had hitherto been too blindly followed. He was for receiving and reading the reports in full.

Dr. J. K. Mitchell, of Philadelphia, said, that the great objection to allowing any committee to cut to pieces the reports, was that what some

men would call lumber, others might think jewels. He had often derived great satisfaction from the old ideas and opinions which were revived in these reports, and which some gentlemen deemed so valueless. He was against any cutting up of these Reports. He was for the fullest array of facts in these reports. He thought it an omission in some of them to have omitted the age at which death took place in fatal cases. It had an important bearing in the mortality of many diseases, typhoid fever for instance.

Dr M. B. Smith, of Philadelphia, was opposed to cutting down the reports.

On motion of Dr. Walker, of Chester, both resolutions were indefinitely postponed. Yeas, 28, nays, 7.

Dr. Burrowes, of Lancaster, offered the following resolutions, which were unanimously adopted:

Whereas, Since our last meeting it has pleased Providence to remove from us our friend and professional brother, Dr. SAMUEL DUFFIELD. As a father, friend and physician he had few superiors. To see was to know him: he looked, thought and talked like a gentleman. His removal has left a vacancy not easily filled; in him "cum tristibus severe, cum remissis jucunde," was not the result of artificial accommodation.

Resolved, That the Pennsylvania Medical Society receive with unfeigned regret the intelligence of the death of their firm friend and professional brother, Dr. DUFFIELD.

Resolved, That a copy of these resolutions be transmitted by the Secretary to the family of our lamented brother, expressive of our heartfelt sympathy.

Dr. West offered the following resolutions, which he prefaced by feeling and eloquent remarks:

Whereas, Since the last meeting of this Society, it has pleased Almighty God, in his wise Providence, to remove by death from our midst, Dr. ISAAC PARRISH, a most useful and highly valued member of the Society;

And whereas, it is due to his memory, as well as useful to those whom he has left behind, to hold up for esteem and imitation his purity of purpose and great integrity of character, both private and professional, as well as the constant devotion and zeal exhibited in his efforts to advance the common cause of medical science, medical education and medical ethics; therefore,

Resolved, That the members of the Medical Society of the State of Pennsylvania, have received, with feelings of unaffected sorrow, the intelligence of the death of Dr. PARRISH, which occurred shortly after the last annual session of the Society, and that they desire thus to record their high estimation of his talents and personal worth, as well as their sense of the heavy loss sustained in his death, by surviving friends both in and out of the profession, as well as by the community at large.

Resolved, That a copy of these resolutions be transmitted by the Secretary to the family of the late Dr. Parrish, with the assurance of the sincere sympathy of the Society in their bereavement.

Dr. H. Carpenter offered the following resolutions:

Resolved, That this Society deeply regrets the decease of its late fellow member and first President, Dr. SAMUEL HUMES, of Lancaster city, for whose moral worth, high professional character, and active zeal in promoting the objects and interests of this organization, the members of the State Medical Society will ever fondly cherish his memory.

Resolved, That the Secretaries are hereby instructed to transmit a copy of the above to the friends of the deceased.

Dr. West stated that the memoir of Dr. Parrish by Dr. Jackson could be obtained by application to the Secretary.

Dr. Jewell called for the reading of the Report of the Bucks County Medical Society.

Dr. Condie was unwilling to compel the reading of this Report, as the authors did not desire it.

Dr. Thompson, of Bucks, said that the communication in question was not a Report of the Bucks County Society, but merely an account of an epidemic, apparently diphtheritis and typhoid fever, which prevailed in Bucks County some six years since. He had no objection, however, to the reading.

And it was accordingly read by the Secretary.

After the reading, Dr. Jewell said he was opposed to publishing mere individual Reports, unless they receive the sanction of the County Medical Society.

Dr. Emerson concurred.

Dr. Condie said this was substantially a County Report. The author of the Report, Dr. Thompson, said it was not a County Report.

Dr. Emerson moved to reconsider the vote by which this communication was referred to the Committee of Publication, and ordered to be published; but the motion was lost.

Dr. H. Carpenter brought in the Report of the Nominating Committee, and the officers therein nominated for the ensuing year were unanimously elected. The following are the officers:

President.—Dr. John P. Heister, of Bucks.

Vice-Presidents.—Drs. Francis F. Burrowes, of Lancaster; John H. Gemmill, of Huntingdon; Robert K. Smith, of Delaware; Jacob M. Confer, of Blair.

Recording Secretaries.—Drs. Henry S. Patterson, of Philadelphia; Isaac R. Walker, of Chester.

Corresponding Secretary.—Dr. Isaac Hays, of Philadelphia.

Treasurer.—Dr. Francis West, of Philadelphia.

Censors, 1st and 2d Districts.—Drs. Wilson Jewell, of Philadelphia; Wm. Corson, of Montgomery; George Halberstadt, of Schuylkill; Samuel A. Benton, of Delaware; S. Thompson, of Bucks.

Censors, 3d and 4th Districts.—Drs. Thomas Wood, of Lycoming; Mordecai Massey, of Huntingdon; A. Rothrock, of Mifflin; Wm. W. McIlvain, of York; J. H. Case, of Perry.

Censors, 5th and 6th Districts.—Drs. C. F. Perkins, of Erie; J. McK. Morgan, of Alleghany; J. P. Gazzam, ditto; Jas. Dickson, do.; W. Anderson, ditto.

Delegates to the American Medical Association for 1854.—Drs. Hiram Corson, of Montgomery; Wm. Maybury, of Philadelphia; John L. Atlee, of Lancaster; Trail Green, of Northampton; J. S. Carpenter, of Schuylkill; Edward Wallace, of Berks; Isaac R. Walker, of Chester; John L. Ross, of Blair; —— Irwin, of Alleghany.

Dr. N. B. Smith proposed a vote of thanks to Mr. Schæffer, who furnished the geological map appended to the Schuylkill County Report.

Unfinished business from the last session being called for—

The Committee to urge the Legislature to pass an act for general vaccination being called in, reported progress and asked to be continued.

Dr. Atlee urged the vast importance of this subject. He thought the object might be accomplished by insisting that no child should be admitted into common schools, unless with a satisfactory certificate of vaccination. In Prussia, no child could be admitted to a public school, or confirmed by the minister, or bound out an apprentice, unless with such a certificate. Some such plan as this was the only means of accomplishing the object.

Drs. Emerson and Condie stated that the petitions already presented to the Legislature intimated the means by which the object could be carried out.

Dr. Atlee was added to the Committee.

The Committee to whom was referred a plan investigating the connection between geological formations and disease, reported that the only practicable plan for accomplishing this object, would be to analyse the County Reports presented from year to year.

Report was accepted, and Committee discharged.

Dr. Heister moved that County Societies be requested to furnish topographical descriptions of their respective counties, accompanied by charts, and to describe epidemics of disease, with particular reference to the geological formations. Carried.

Adjourned.

Friday May 27th.—Afternoon Session.

The Association met at 4 o'clock; the President, Dr. Corson, in the Chair.

The roll being called, the minutes of the morning session were read.

Dr. Condie requested the minutes to be amended, relative to a motion stated to be made by him, but which should be really attributed to Dr. Burrowes.

The minutes were adopted.

Dr. J. L. Atlee offered the following resolution, which was adopted:

Resolved, That the Committee on Publication be requested to furnish annually, to the Epidemiological Society of London, a copy of all published Transactions of this Society.

Dr. Robert K. Smith offered the following resolution, which was adopted:

Resolved, That the thanks of this Society be tendered for the polite invitation received to visit the Academy of Natural Sciences, Academy

of Fine Arts, U. S. Mint, Laurel Hill Cemetery, Statuary of St. Stephen's Church and Girard College; and to Pres. Allen, of the last institution, for his attention and hospitality to the members of this Society, on the occasion of their visit.

Dr. Condie presented the following resolution, which being put by the Secretary, was passed:

Resolved, That the thanks of this Society be presented to Dr. Hiram Corson, its late President, for the impartial and courteous manner in which he has presided over its deliberations during the present session.

Dr. Turnbull offered the following resolution, which was adopted:

Resolved, That the thanks of this Society be presented to the Secretaries for the faithful manner in which they have discharged their laborious duties.

Dr. Parry offered the following, which were adopted:

Resolved, That, for the purpose of acquiring further information in relation to the Kine Pock, and increasing facilities for procuring and preserving supplies of fresh and genuine vaccine virus, this Society recommend to each of the County Societies in the State to appoint a Committee to collect any new and useful facts in relation to vaccination, and to report the same to a central Committee, to be appointed by this Society, at least two weeks before the annual meeting.

Resolved, That said central Committee shall consist of three members, and it shall be its duty to draw up a synopsis of the reports received, and present the same to this Society, at its annual meeting.

The Chair appointed Drs. E. Parry, H. Carpenter and P. Cassiday a Committee under the above resolution.

Dr. S. Jackson, of Northumberland, in order to expedite and cheapen the printing of the Transactions, offered the following, which was passed.

Resolved, That it is recommended to each County Society to send by its delegates, to the State Society, one dollar for every five of the members of said County Society, to be paid to the Treasurer.* Each County Society to pay the balance of its quota on the delivery of the Transactions.

Dr. Heister offered the following resolutions, which were carried:

Resolved, That this Society earnestly requests all County Societies that have not yet done so, to furnish, at an early period, topographical histories of their respective counties, accompanied by charts.

Resolved, That the annual reports of the different County Societies be recommended to have strict reference to the different geological formations, in order to ascertain, by a comparison of facts, how far the prevalence of epidemics and other diseases may be influenced by them.

Dr. Turnbull suggested the propriety of asking the Legislature to pay for the printing of the Transactions of the Society.

After some discussion by Drs. Atlee and Condie, Dr. Coates requested Dr. Spencer, of New York to give his views upon this matter.

Dr. Spencer said, that the manner in which they conducted these

* No Society, however small, to send less than five dollars.

matters in New York was very plain and simple. Having fully made up their minds as to the propriety of what they were about to ask for, they then endeavored to influence the Legislature, by appealing individually to its older members, and explaining to them the practical benefits to the community that were sure to result from such a publication.

Dr. H. S. Patterson called the attention of the Society to certain resolutions which had been laid on the table at the last yearly meeting, and which, he stated, now came up to be acted upon.

Dr. Maybury moved that the resolutions offered by Dr. Emerson, at that meeting, be adopted. Agreed to.

Dr. Condie moved that the resolutions of the Montgomery County Society, laid on the table at the last yearly meeting, be indefinitely postponed. They were so postponed.

On motion, Drs. Condie, Norris and Yardley, were added to the Publication Committee.

Dr. —— moved that the President-elect be requested to deliver an address at the opening of the next annual meeting. He was so requested.

Dr. J. L. Atlee moved that a Committee be appointed to conduct the President-elect to the Chair.

Drs. Atlee and Maybury being appointed a Committee, conducted the President-elect to the Chair; when he was introduced to the Society by Dr. Corson.

Dr. Corson, the President, returned his thanks, upon retiring from the Chair, for the courtesy and kindness with which he had been honored by the Society.

Dr. Heister, of Berks County, the President-elect, said that when he looked around and saw so many, who were his seniors, he felt, indeed, highly honored by his present position. He took great interest in the organization of the profession throughout the whole United States, as well as in this State. He was among the founders of this Society, and his interest in its proceedings was yearly increasing, as, indeed, he believed, was that of all the members present. He was glad to see a still greater increase in the numbers of the Society, there being eighty-five present, an increase of ten over last year. In conclusion, he stated, that, with the kind assistance of the members, he would endeavor faithfully to fulfil the duties of his office.

Dr. Atlee offered the following resolution, which was adopted:

Resolved, That the thanks of this Society be presented to the Committee of Arrangements for their attention in furnishing such excellent accommodation for the session of the Society, and for the zeal manifested to provide for our comfort and pleasure.

Dr. Geiger, of Schuylkill County, moved that the next meeting of the Society be held in Pottsville, on the last Wednesday in May, 1854, at 11 o'clock in the morning. Adopted.

Dr. Corson moved that the thanks of the Society be tendered to Dr. Spencer, for the donation of a volume of the Transactions of the State Society of New York; and that a Committee of three, of which the President of the Society should be Chairman, be appointed, to take

into consideration Dr. Spencer's atomic theory of vegetable and animal life.

Dr. Heister, the President, declined serving as Chairman.

Dr. Geiger moved that the President be excused from serving.

Dr. Corson moved that Drs. Turnbull, Kennedy and Carson be appointed.

Dr. Carson declined.

Dr. Kennedy also declined.

After some discussion, Dr. Coates moved for a reconsideration of Dr. Corson's motion. Being put, it was so reconsidered.

Dr. Coates then moved that the first clause of Dr. Corson's resolution be put by itself, which being done, was adopted.

Dr. Corson then withdrew the second clause of his resolution.

There being no further business before the Society, Dr. Atlee moved an adjournment *sine die.*

Correspondence of the Philadelphia North American and U. S. Gazette.

THE ASSOCIATION OF MEDICAL SUPERINTENDENTS OF AMERICAN INSTITUTIONS FOR THE INSANE.

Baltimore, May 11th, 1853.

In October, 1844, a number of the medical gentlemen connected with the institutions for the insane, in different parts of the United States, assembled in Philadelphia, and formed the Association whose title is given above, and which now holds annual meetings in different parts of the country. The association now numbers among its members the chief medical officers of thirty-one respectable institutions for the insane in nearly every part of the United States and of the British Provinces, and has already held two meetings in Philadelphia, one in Washington City, one in Utica, N. Y., one in Boston, two in the city of New York, and is now holding its eighth in Baltimore.

Much good has already resulted from the members contributing the results of their very extended experience in mental diseases, and by the free discussion of all subjects connected with the welfare of the insane, and especially in reference to the construction, organization and general management of institutions for their treatment. Wherever the meetings have been held, the members of the Association have invariably visited and carefully examined all the institutions for the insane in the vicinity, and have thus become familiar, not only with their good qualities, but also with the defects which have sometimes existed, and which the influence of the Association has often been instrumental in removing. Various valuable essays have been read at the different meetings, and been published in the journals specially devoted to insanity, or in the other medical periodicals of the country; and the sentiments of the Association have of late been frequently quoted as authority, by various officers of the General and State governments, as well as others interested in the preparation and management of hospitals for the insane.

Since the formation of the Association, in 1844, it has had to mourn the death of some of the most distinguished of American Physicians who have devoted themselves to the treatment of the insane, and whose labors

have been recognized wherever insanity has been studied, or those suffering from it been properly cared for. The names of Woodward, Brigham, Macdonald, and others, will take a place on the scroll of fame with those of Pinel, Tuke, Esquirol, Rush, and all the worthies whose benevolence and determined energy led to a new system of treating the insane, based upon reason, humanity, and the plainest principles of practical christianity.

This Association, whose history and objects have been briefly sketched above, commenced its 8th meeting, at the Eutaw House, Baltimore, on Tuesday, the 10th of May, 1853, at 10 o'clock A. M.

The meeting was called to order by Dr. Buttolph, of New Jersey, (the Secretary,) and in the temporary absence of the President and Vice President, on motion of Dr. Kirkbride, of Philadelphia, Dr. F. T. Stribblers, of the Western Asylum of Virginia, was appointed President pro tem.

On motion of Dr. Fonerden, of Maryland, a committee to prepare and arrange business for the meeting was appointed by the chair: Drs. Fonerden, Kirkbride and Buttolph being the committee.

On motion of Dr. Kirkbride, the members were authorized to invite visitors to attend the sessions of the Association.

On motion of Dr. Tyler, of New Hampshire, a committee, consisting of Drs. Tyler, Nicholls and Curwen, were appointed to select a place and designate the time for the next meeting of the Association.

Dr. Kirkbride exhibited and explained the plans of the new Alabama Hospital for the Insane, prepared under his direction, and which building is now being erected at Tuscaloosa, under the supervision of Messrs. Sloan and Stewart, architects of Philadelphia.

Dr. Nicholls presented and described the drawings for the new United States Hospital for the Insane of the Army and Navy, and of the District of Columbia, authorized by an act of the last Congress, and which has been already commenced.

Dr. Nicholls is the Superintendent of this Hospital, and the drawings are from his sketches, by Thomas U. Walter, Esq., the Government Architect.

Dr. Stewart, President of the Maryland Hospital for the Insane, exhibited, and had described by Mr. Niernstein, the architect of the building, the plans for the new Maryland State Institution for the Insane, which has just been located on a fine farm a few miles from the city of Baltimore.

All these plans differ somewhat in their details, but are very similar in their general character, and exhibit very strikingly the immense progress that has been made in planning this very important class of public institutions. Each is intended to accommodate 250 patients, with the necessary officers and attendants.

It is quite safe to say that, if the plans are faithfully carried out, these three hospitals will be the best, and most convenient, as well as most truly economical, to be found in any country. The plans presented are believed to conform in every essential respect to the principles here-

tofore adopted by the Association, and which are now pretty generally regarded as authority on the subject.

Invitations were received and accepted to visit the site of the new State Hospital for Maryland, and the Mount Hope Asylum this afternoon, the Maryland Hospital on Thursday afternoon, and the site of the United States Hospital at Washington on Friday. Adjourned to meet at the site of the new hospital at 4 P. M.

In the afternoon the members of the Association visited the insane in the Baltimore Alms House, situated on a beautiful farm of more than 300 acres, and about two miles from the city. The general hospital appears to be well conducted, but the condition of the insane is a reproach to the age, and a foul blot on the noble and enlightened city and county to which it belongs. Here are seen some of the horrors of a past age—fellow beings, male and female, chained by the leg, and permanently secured in low, damp, underground apartments, that ought never to be inhabited by those afflicted with any disease,—or exposed like wild beasts under a shed in the small, cheerless yards. Surely such a state of things cannot long be permitted, and a visit by the Maryland Legislature ought to be sufficient to induce them to make any appropriation, or to pass any laws necessary to prevent such a state of things so near her beautiful and hospitable Capital, or in any section of the State.

The Association then proceeded in carriages, under the guidance of Dr. Stewart, President of the Board of Trustees, to visit the site of the new State Hospital, six miles from Baltimore, and were highly gratified with the good judgment which has been exercised in the selection of a spot on which it is proposed to erect the noble structure which is to contribute so essentially to the comfort of the afflicted, and the benefit of the whole community. There are one hundred and thirty acres of land in the tract, and the views from it are of peculiar beauty, embracing Baltimore, the Chesapeake bay, with its shipping, and various other objects of interest.

The following members, representing the various institutions mentioned, are present at the meeting, viz: Dr. Bell, of the McLean Asylum, near Boston; Dr. Ray, of the Butler Hospital, at Providence, R. I.; Dr. Tyler, of the N. H. Asylum at Concord; Dr. Walker, of the South Boston Hospital; Dr. Benedict, of the New York State Hospital at Utica; Dr. Brown, of the Bloomingdale Asylum, N. Y.; Dr. Bullock, of the King's County Hospital, near Brooklyn, N. Y.; Dr. Buttolph, of the N. J. Hospital at Trenton; Dr. Kirkbride, of the Pennsylvania Hospital for the Insane at Philadelphia; Dr. Worthington, of the Friends' Asylum at Frankford, Pa.; Dr. Curwen, of the Pennsylvania State Hospital at Harrisburg; Dr. Stewart, of the Philadelphia Hospital, Blockley; Dr. Fonerden, of the Maryland Hospital; Dr. Stokes, of Mount Hope Asylum, Md.; Dr. Nichols, of the U. S. Hospital, Washington City; Dr. Stribling, of the Western Asylum of Virginia; Dr. Jarvis, of the Private Institution of Dorchester, Mass.; Dr. Patterson, of the Indiana Hospital; Dr. Kendricks, of the Ohio Hospital at Columbus, and Dr. Smith, of the Missouri Hospital at Fulton. Dr. Bell is President of the

Association; Dr. Ray, Vice President; Dr. Buttolph, Secretary, and Dr. Kirkbride, Treasurer.

Several gentlemen connected with the management of Hospitals for the insane are also present by invitation of the Association.

Evening Session—May 10.

A paper on the Lincoln (English) Lunatic Asylum, and a discussion of some of the peculiar views there entertained, prepared by Dr. Galt, of the Eastern Asylum of Virginia, was read, and the principles contained in the paper were critically examined in the discussion which followed, and which was participated in by Drs. Kirkbride, Benedict, Stribling, Jarvis, Stewart and Bell; the sentiments of all these gentlemen being, on many points, entirely at variance with those of the writer.

Dr. Kirkbride read a paper on night watching, and the general care of the patients at night in Institutions for the Insane, strongly urging its importance, and recommending a material extension of the means commonly employed. The Association then adjourned till 9 A. M. to-morrow.

Morning Session—May 11.

The paper, read by Dr. Kirkbride last evening, led to an animated and very interesting discussion, participated in by Drs. Benedict, Smith, Stewart, Ray, Jarvis, Walker, Kendricks, Worthington, Brown, Curwen, Fonerden, Stribling, Stokes, Nicholls, Buttolph, Bell and Kirkbride. The customs of all the institutions represented, in reference to the care of their patients at night, were fully examined, and very general uniformity of sentiment seemed to prevail as to what was desirable, although there is considerable difference still existing in practice on some points connected with the subject.

Some observations made by Dr. Kendricks, of Ohio, relative to modes occasionally adopted to break up the bad habits of the insane, led to remarks by Drs. Bell, Kirkbride, Stribling, Jarvis and Benedict, in the strongest reprobation of the use of any means in our institutions which partook of the character of punishment. Although temporary benefit might undoubtedly sometimes result, it was believed by the speakers, that this could not be received as a justification of such practices.

Dr. Nicholls read a paper, prepared by Dr. Galt, on "Pledges by the Insane," which, after a brief discussion, was laid on the table.

Dr. Jarvis read a very elaborate and valuable paper on the effects of over or perverted action of the Brain or Nervous System on Mental Health, which was fully discussed by Drs. Kirkbride, Fonerden, Ray, Buttolph, Bell, Smith and Jarvis, in decided commendation of the principles of education and modes of life recommended. This discussion led to a reference to the phrenological doctrines of the agency of the brain in the action of the mind, on which point the members were found to entertain quite different sentiments. At 2 P. M. the Association adjourned to 3½ P. M., and then repaired to the Mount Hope Asylum, which the members were invited to visit yesterday. This institution is

in the suburbs of Baltimore, but the extension of the city, and the opening of its streets will soon compel its removal to a more private location. It is under the entire control of the Sisters of Charity, Dr. Stokes, its excellent physician, having charge only of the medical department.

The Association was received in the kindest manner, and elegantly entertained by the Sisters and Dr. Stokes, who exhibited and explained the uses of every part of the establishment, which is kept in the neatest order; and the general appearance of the patients is creditable to all concerned in their care. After returning from Mount Hope, the Association re-assembled at the Eutaw House, when Dr. Ray read a valuable paper "on undescribed forms of acute cerebral disease," detailing a large number of cases, and skilfully analyzing the views of various writers on the subject. The discussion of this paper was deferred for the present. Adjourned till 9 A. M. to-morrow.

The members of the Asssociation accepted the invitation of Dr. R. S. Stewart, the indefatigable and veteran friend of the insane, and were elegantly entertained at his hospitable mansion during the evening.

Morning Session—May 12.

After the reading of the minutes, the Association proceeded to a discussion of the paper of Dr. Ray, on certain forms of cerebral disease, in which Drs. Kirkbride, Patterson, Walker, Kendrick, Stribling, Benedict, Brown, Ray and Bell participated. The form of disease referred to by Dr. Ray, seemed to differ from that heretofore described to the Association by Dr. Bell, and which, although quite prevalent in some districts, is entirely unknown in other sections of the United States.

On motion of Dr. Stribling, a Committee of finance, consisting of Drs. Stribling, Kirkbride and Buttolph were appointed.

Letters from Drs. Earle and Chandler, relative to reports from Hospitals, were read and laid on the table.

The Committee to select a place and proper time for the next meeting of the Association, recommended that it be held at the city of Washington, on the second Tuesday of May, 1854, at 10 o'clock A. M.

Dr. Ray moved to amend by substituting Providence, and fixing the time in 1855, but the amendments were lost, and the recommendation of the committee subsequently agreed to, with great unanimity.

Dr. Kirkbride, by appointment of the Association last year, read a series of propositions relative to the proper organization of Hospitals for the Insane, which, after mature consideration and a very full discussion, and various amendments at the afternoon and evening sessions, were unanimously adopted. The proper organization of Institutions for the Insane is one of the most important measures that can engage the attention of those getting up new Hospitals, or promoting the welfare and prosperity of the old; and the sentiments of the Association on the subject, the result, as they are, of long practical experience in every section of the country, and thus formally expressed, will, it is hoped, lead to important results.

Dr. Stewart, the President of the Board of Trustees of the Maryland Hospital, by invitation, explained the organization of that institution, and gave an interesting statement of his views on the whole subject.

THE MEDICAL EXAMINER.

PHILADELPHIA, JUNE, 1853.

A considerable portion of our space in this number of the Examiner is occupied with Reports of the Proceedings of the American Medical Association and of our State Medical Society, both of which held their annual sessions within the past month. We have no doubt that the detailed accounts of their Proceedings which are presented to our readers will be acceptable, for we are satisfied that the interest which is felt in the working of our professional organization is strong and universal. Our reports of both the National and State Proceedings will be found, we think, a full and faithful record of everything of any interest that transpired at either meeting. In the preparation of the Report of the Proceedings of the American Medical Association, we have had the opportunity of completing our own notes from the excellent reports of the New York Daily and Medical Times, and of the New Jersey Medical Reporter, to all of which our acknowledgments are due. The Report of the Proceedings of the State Medical Society was prepared from notes taken for the Examiner.

It was the privilege of the editors of this Journal to be present at the late meeting of the American Medical Association at New York, and we are indeed at a loss for language to express our sense of the magnificent public reception and cordial private hospitality which the delegates to that body received from their professional brethren in New York. We can only say that it was a reception worthy of the great metropolis of the nation and of her high-toned physicians.

The transactions of the Association were characterized by the greatest harmony and discretion, and in interest and importance the scientific reports and other papers presented and read were not inferior to those of previous meetings. As regards the proposed amendments to the Constitution, which came up from last year's meeting, they were indefinitely postponed, with the exception of the amendment in favor of a representation from the Medical Staffs of the Army and Navy.

The Proceedings of our State Medical Society were characterized by the zeal and spirit which they have always elicited. Eighty-five members were in attendance, and a very large number of highly valuable reports from the County Medical Societies were presented and read. The meeting was in every respect a most satisfactory and agreeable one.

MEDICAL NEWS.

UNIVERSITY OF PENNSYLVANIA.—Dr. JOSEPH LEIDY, of Philadelphia, has been appointed Professor of Anatomy in this Institution, in place of Dr. Horner, deceased.

We congratulate the friends of this venerable school in the selection of one so eminently qualified to occupy the post of the lamented Horner. His talents and industry cannot fail to win and secure the admiration of those who may attend upon his teachings.

ST. JOSEPH'S HOSPITAL.—Dr. WM. B. PAGE has been appointed one of the Surgeon's in place of Dr. Horner, deceased.

By a late paper, we learn the arrival of Drs. WOOD and BACHE in Paris.

Drs. MOTT of New York, and WARREN of Boston, have been elected members of the *Academie de Medicine* of Paris.

The seeds of Parsley and Celery have been shown to have a decided influence over malarious fevers, although their operation is not equal to Quinine.

It is announced that the second volume of Pereira's Materia Medica will be arranged for publication in England this summer.

Dr. WILLIS G. EDWARDS, Professor of Chemical Medicine and Pathological Anatomy in the Medical Department of the St. Louis University, resigned his chair on the 14th of March, on account of his continued ill health and his consequent anticipated removal from the city.

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NOTICE TO CORRESPONDENTS.

Communications and Books for notice should be addressed to the Editors, care of Messrs. Lindsay & Blakiston.

Letters, &c., connected with the *business affairs* of the Journal should be addressed to the Publishers.

Papers for publication must be received *before* the 20th of the month, or they cannot appear in the forthcoming number.

The following Journals have been received in exchange:

American Journal of Medical Science. July, 1853.
Western Lancet. December.
New Orleans Monthly Medical Register.
Southern Journal of the Medical and Physical Sciences.
New Orleans Medical and Surgical Journal.
Medical Recorder.
Western Medico-Chirurgical Journal.
Union Journal of Medicine.
Medical News. Philadelphia.
Buffalo Journal.
New York Medical Gazette.
The Boston Medical and Surgical Journal. (Weekly.)
Stethoscope and Virginia Medical Gazette.
New Jersey Medical and Surgical Reporter.
Transylvania Medical Journal.
Southern Medical and Surgical Journal.
New Hampshire Journal of Medicine.
The London Lancet. (Weekly, London.)
The Medical Times and Gazette. (Weekly, London.)
Dublin Medical Press.
Dublin Quarterly Journal.
British and Foreign Medico-Chirurgical Review.
Journal of Psychological Medicine.
London Journal of Medicine.
Edinburgh Medical and Surgical Journal.
Journal of Psychological Medicine.
London Pharmaceutical Journal.
Edinburgh Monthly Journal.
Journal of Pharmacy.
North Western Medical Intelligencer.
American Journal of Insanity.

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BOOKS RECEIVED.

Henle's Pathology.
Tilt's Elements of Health.
Budd on the Liver.
Taylor's Medical Jurisprudence.
Williams' Principles of Medicine.
Regnault's Chemistry.

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The foreign correspondents of the Examiner will please direct their Exchanges and other communications to the care of Tribner & Co., No. 12 Paternoster Row, London, or Mr. H. Bossange, 21 Bis, Quai Voltaire, Paris.

THE

MEDICAL EXAMINER,

AND

RECORD OF MEDICAL SCIENCE.

NEW SERIES.—NO. CIII.—JULY, 1853.

ORIGINAL COMMUNICATIONS.

On the Influence of the Mineral Kingdom on Disease.

By J. P. HIESTER, M. D.

READING, PA., June 8th, 1853.

To the Editors of the Medical Examiner:

In the January No. for 1852, you did me the honor to publish a short communication on the above subject, which had been read before the Berks County Medical Society. I there endeavored to show, by established facts and a course of reasoning, the influence exerted by inorganic matter, as presented in the natural state, upon organized beings.

A sufficient number of facts were adduced to prove the influence of soil upon vegetables, and the probable effect of soil and water, or *minerals in solution*, upon the lower orders of animals and fishes. From analogical reasoning it was conjectured, that the higher orders of animals were also subjected to a greater influence by mineral agents than we are, in the present state of our knowledge, prepared to admit.

It was farther concluded, from the activity of many of the mineral agents that are known to enter into the composition of

the animal organism, either necessarily or adventitiously, that their influence might, and probably did, produce decidedly pathological conditions, or at least such changes as would strongly predispose to disease; and that even deficiencies of many mineral substances in certain soils, might produce such conditions or predispositions. Iodine, which late observation has shown to be far more extensively distributed than was formerly supposed, was particularly referred to as one of these active agents.

In verification of the above conjectures, I would beg leave to call the attention of your readers to the following well-authenticated and interesting facts contained in a communication made to the French Academy of Sciences, extracted from the May No., 1853, of the Journal de Médecine et de Chirurgie Pratique.

"M. Chatin communicated to the Academy the following extremely curious facts:

"Fully and Saillon are two contiguous villages situated in the midst of the vineyards that border the right bank of the Rhone. Fully, where the whole population is goiterous, is remarkable for its great number of Cretins; Saillon, on the contrary, was renowned in the Vallais for the fine health of its inhabitants, who were scarcely ever attacked by goitre, and more rarely still by cretinism. The contrast was the more marked as the conditions of altitude, aëration, exposure, &c., are as nearly alike as is possible in the two villages.

"But within a few years Saillon has lost the happy exemption which it enjoyed;—goitre and cretinism have increased to a degree that scarcely leaves Fully any room for envy. The observations made by M. Moulin, President of Saillon, prove that the progress of goitre and cretinism date from the time when, in defiance of the counsel of M. Barmont, brother of the Swiss Ambassador at Paris, the commune took the water, destined for the use of the village, formerly received from a lower point of the torrent, (the Salente,) from a point where it is precipitated in a cascade from the glacier of the mountain. Between these two points, a strong thermal spring (temperature about 28 C.) falls into the torrent, constituting nearly a sixtieth part of its waters.

"From my analysis it results:

"1. That water taken from above the point where the hot spring enters the torrent, and which is that at present used in Saillon, is destitute of *Iodine*, like that of Fully, and of the greater part of the districts of the Vallais.

"2. That the water taken from the point whence Saillon was formerly supplied is more iodized than the water used in Paris.

"3. That the water of the thermal spring above referred to, is a true mineral water, containing at least sixty times more iodine than the water of Paris, and that of most of the countries where goitre is unknown.

"These facts go to prove:

"1. The existence and nature of a *local* cause of goitre and cretinism.
"2. The possibility of introducing iodized water as a prophylactic in these maladies, both as a regimen for man, and for animals producing meat, milk, &c."

Notes of Cases. By Geo. W. Brown, M. D., Port Carbon, Pa.

CASE I.—STRANGULATED HERNIA.

I was called to see Mrs. H., a tall, spare woman, 59 years of age, a native of Scotland, January 9th, 1852. I found her complaining of severe pain in the right groin, and extending from that point over the whole abdomen; a constant desire to go to stool without being able to pass anything from the bowels; frequent vomiting of a dark green, bilious matter; tongue very much coated with a thick yellow fur; constant thirst with a desire for cold drinks; pulse about 100, small and weak; skin warm and moist, and the countenance anxious and dejected. On examining the abdomen I found it a good deal distended and tympanitic, and slightly tender to the touch, and in the right groin a large hernial tumor. The history she gave of her case was, that twenty years previous, while in Scotland, she was assisting to take in some hay, and while in the act of raising a large forkful, she felt something give way in the right groin, and a few days after she discovered a small tumor there, which disappeared upon slight pressure, but had re-appeared after a long walk or a hard day's work ever since, but always disappeared on going to bed, relaxing the muscles and making gentle pressure upwards. About ten years since, while in Scotland, it became strangulated, but was relieved by purgatives and opiates. Latterly it had become more troublesome, coming down oftener, and being more difficult to return, as well as more painful when it was down. This morning, immediately after she arose, she was seized with the symptoms enumerated above, which have continued pretty much the same throughout the day, sometimes abating in severity a little and then returning more severely. Every attempt to swallow anything, even the blandest liquids, produces vomiting. The pain has been considerably abated by pretty large doses of the tinct. opii, which she has taken, and the application of warm fomentations to the tumor. I placed my patient in the proper position, and made use of the taxis for a short time, but very soon desisted in consequence of the pain it gave her. I directed

her to have opium 1 grain, calomel gr. iij. every three hours, the warm fomentations to be continued to the tumor, and a turpentine liniment to the entire surface of the abdomen.

Jan. 10*th*, 10 A. M.—Patient passed a very good night, less vomiting and less pain. Gums touched by the calomel, pulse small and weak, skin bathed with warm perspiration, abdomen tympanitic but less painful to the touch, tongue less coated and countenance less dejected. I again tried the taxis, but was again obliged to desist in consequence of the pain it gave the patient. Directed a warm bath every 6 hours, the liniment and the fomentations to be continued in the intervals. Opium gr. 1 every four hours, without the calomel, and large injections of warm water every four hours, so as to distend the colon to its utmost extent.

Jan. 11*th*, 10 A. M.—Patient passed a very good night, passed some wind from the bowels but no feculent matter. All the symptoms are relieved, no pain, and scarcely any sickness of the stomach, mouth very sore, teeth all loose, tumor less tense and less painful to the touch, pulse fuller and stronger and the countenance somewhat cheerful. Continue treatment, with the addition of light nourishment. My patient continued to improve (excepting that she passed no feculent matter from the bowels) up to the morning of the 15th, when she was again seized with violent pain and vomiting, which soon became stercoracious. The pain commenced in the tumor, but soon extended over the entire abdomen, which soon became very tympanitic and very tender to the touch. In the evening I told her that nothing but an operation would relieve her, to which she said she would submit, if no better, by morning. I directed one grain of morphine every four hours, and left.

Jan. 16*th*, 10 A. M.—Countenance sunk and anxious, skin cold, pale, shrunken and covered with a greasy perspiration, pulse small and thready, patient unable to articulate so as to be heard, unless the ear is placed close to her mouth. Increased tympanitis, but less pain. She readily consented now to an operation, and Dr. D. J. McKibbin having been called in consultation, readily agreed with me as to the necessity of operating immediately as the only chance for the patient, but considered that almost desperate under the circumstances. We now gave her

tinct. opii ʒij., and waited half an hour, and then placed her upon the table in proper position to operate. I commenced my incision immediately above the base of the tumor and carried it over it in the course of the femoral vein to a point about half an inch below it, and down to the superficial fascia of the thigh, which I pinched up and separated from the parts beneath by rubbing it between my thumb and finger, and made a slight opening into it and divided it upon the grooved director. I divided each successive layer in the same way till I came down to the sack, which was easily detected by the blue appearance and elastic feel of the distended intestine within it. I now passed my finger upon the outside of the sack and divided Gimbernat's ligament, when the stricture was immediately relieved, and the gas passed out of the strangulated intestine. I now attempted to return the sack and intestine entire, but found the sack adherent in every part so as to render that impossible. I then dissected the sack loose with my fingers and the handle of the scalpel, and attempted to return, but this I could not accomplish in consequence of another stricture at the neck of the sack. I now concluded to open the sack and divide the stricture at its neck, but this I found very difficult to accomplish in consequence of the intestine having contained nothing but gas, and this having escaped as soon as the stricture upon the outside of the sack was divided, and left it like a piece of wet bladder; but after a good deal of trouble I succeeded in separating the sack from the intestine, and puncturing it, then by seizing the whole and drawing it down, I was enabled to pass the director and divide the sack upon it. As soon as the sack was divided there was a discharge of about one and a half ounces of clear serum. The bowel appeared rather dark and congested, but otherwise healthy. I returned the bowel first and then the sack, and closed the wound by three stitches of the interrupted suture and straps of adhesive plaster. The patient was very much exhausted, but expressed herself entirely relieved. We now placed the patient in bed upon her back, with the right thigh flexed upon the pelvis in such a manner as to relax the abdominal muscles, and prevent any pressure upon the wound by the contents of the abdomen, and applied the simple warm water dressing. To have opium one gr. every four hours, with light broth and wine whey for

nourishment. To be kept perfectly quiet and from changing her position.

Jan. 17*th*, 10 A. M.—Patient passed a very good night, no pain, very little thirst, gums less sore, tongue cleaning off, skin warm and moist, pulse one hundred, full and soft, countenance natural, less tympanites, and less soreness upon pressure. Passes wind freely from the bowels, but no feculent matter. Continue treatment as before.

Jan. 18*th*, 10 A. M.—Patient continues to improve; relishes nourishment, but still has passed no feculent matter. Continue treatment, with the addition of an occasional injection of warm water.

Jan. 19*th*, 10 A. M.—Patient continues to improve, wound nearly united by the first intention. Bowels have been freely moved by the injection; stool natural and consistent. From this time forward my patient continued to improve rapidly, and in about one month after she was operated upon she had entirely recovered. I saw her three days since, and she is in robust health, and the hernia seems to be radically cured, the cicatrix being firmly united to the pubic bone. She experiences no inconvenience from it whatever. The prominent points in this case are: 1st. The complete relief of all the symptoms of strangulation produced by calomel and opium and the soothing treatment, although the stricture was not removed. 2d. The hopelessness of any attempt at reduction, by the taxis, of an old hernia, although the patient may tell you, as mine did, that the tumor only came down that morning, for I am satisfied, from the amount of adhesions, that the hernia had been irreducible for the last ten years. 3d. The injury that would result from persisting in the taxis in such a case, the use of tart. ant., the tobacco injection, and the many other remedies that are recommended in the books, in strangulated hernia. And lastly, the complete success of an operation under circumstances apparently so hopeless.

CASE II.—DISLOCATION OF THE FEMUR.

I was called to see Samuel B., November 22d, 1850, and on enquiry I found that some two hours previous he had been mining, upon his knees, when a fall of coal came down and struck him upon the back part of the pelvis, in such a manner as to force

the head of the femur out of its socket and place it upon the dorsum of the ilium, presenting outwards and backwards, with the great trochanter resting against the edge of the acetabulum behind, the limb being shortened near three inches, the foot inverted and resting upon the other above the instep. I had purchased Dr. Jarvis's instrument a few days previous, and I thought this a very good opportunity for testing its good qualities; so I placed my patient upon a common deal table, and applied the instrument according to the Doctor's directions; and now I supposed that all I had to do was to turn the ratchet and the bone would fly to its place; but after torturing my patient for some two hours, trying my utmost to make the extension in the line of displacement, I gave it up in despair, and adjourned the case till nine o'clock the next day, very much cooled in regard to the infallibility of the instrument I had purchased, at least in my hands. But still supposing that my failure was more owing to my inability to apply it than to any fault in the instrument, I sent a note to Dr. Carpenter, (upon whose recommendation I had been induced to purchase the instrument,) a gentleman of acknowledged abilities in all cases of the kind, asking him to meet me in consultation in the case. We met punctually to the time, and I again applied the instrument, and asked him to take charge of the limb and reduce it. He took charge of the limb, and, laboring for near three hours, he gave it up in despair, also perfectly satisfied that he could not make the extension in the line of displacement, (the very thing for which the inventor recommends it so highly,) and that the lever placed upon the instrument would make a very nice plaything for a child, but would certainly never subserve the purpose for which it was intended, viz., forcing the head of the bone out of its malposition. We now put the patient under the influence of chloroform, and applied the sheets in the old way recommended in the books, but soon found that we were unable to make extension sufficiently long to overcome the resistance of the muscles; consequently we adjourned the case until 3 o'clock P. M., when we again met and applied the compound pulley, and put the patient under the influence of chloroform, when it was reduced in twenty minutes. The patient was placed comfortably in bed, and at the end of a week had so far recovered as to walk about with

ease. I would say in this connection to all medical students, beware of all patented instruments for setting fractures and reducing luxations, and in their place get a few good splints and a set of compound pulleys, as they alone can be relied on in practice, notwithstanding the many certificates they possess from many of our professors who stand deservedly high in the profession.

CASE III.—DISLOCATION OF THE FEMUR.

I was called in consultation with a neighboring physician to Dennis D., a young man about twenty-five years of age, a miner by occupation. Some four hours previous, while engaged in mining, upon his knees, a fall of coal came down, and a large piece with a sharp cutting edge struck him immediately over the os coccyx, cutting the soft parts down to the bone, passing over the sphincter ani muscle, which receded before the force of the blow and was uninjured; it passed through the entire length of the perineum and through the scrotum, separating the testicles, leaving one upon either side of the incision. The depth of the incision was about one inch. I cleaned out the wound by removing the coal dirt and other foreign substances, and closed it with the interrupted suture and adhesive straps, and ordered the simple warm water dressing. Not supposing he had received any other injury, as he made no other complaint, I made no further examination, but left him in the hands of his attending physician. On the 8th of January, 1852, just seven weeks after he had been injured, I was again called to see him, and was informed that he had not yet been able to leave his bed, and that he had dismissed his physician because he was dissatisfied with his attendance. On examination, a dislocation of the femur upwards and backwards into the sciatic notch was discovered, which had occurred at the time of his injury. The wound of the perineum was completely cicatrized, and I must confess that I felt mortified that I had overlooked the dislocation at my first visit, as I knew the attending physician, who was quite a young man, depended upon me for a proper diagnosis in the case, and as I had failed to detect it he had never suspected such a thing. Seeing that the man must remain a cripple for life if the dislocation remained unreduced, and that my reputation must suffer as a necessary consequence, I determined, notwith-

standing the length of time it had remained in its malposition, to attempt its reduction at all hazards.

On the 9th of January, in consultation with Dr. McKibbin, we placed the patient on a bed upon the floor, and applied the compound pulleys with the counter extending band upon the injured side, and kept up extension for about 20 or 25 minutes at a time, with intervals of rest for about two hours, without being able to dislodge the head of the bone from the position it had taken. We then shifted the counter extending band to the sound side, and after keeping up extension constantly for about half an hour, the head of the bone gradually slipped into its place without the slightest noise. So gradual had been its reduction that we were not satisfied that it was reduced until, in order to satisfy ourselves, we commenced flexing and extending the limb when it slipped out again. We again applied the pulleys and reduced it with a very slight effort; and again, in trying to satisfy ourselves of its proper reduction, it slipped out, but was again reduced with a very slight effort; when we placed the patient upon his back in bed and bound his knees together with a strong roller, and kept him in that position for four weeks, when he was permitted to get up and go about on crutches. He has at this date entirely recovered the use of his limb. The acetabulum appeared to be almost entirely filled, hence the ease with which it slipped out of its place after reduction. That the head of the bone occupied the sciatic notch was clearly demonstrated by an examination through the rectum, and by the canal left in the fibres of the gluteic muscles after its reduction from that point to the acetabulum, caused by its having traversed from one point to the other.

The prominent points in this case are: 1st. The necessity of a thorough examination of every case to which we are called, and the great injury that may result, not only to the patient, but to our own reputation and to the profession at large, from its neglect. 2d. That a dislocated femur may be reduced, nearly two months after the accident, without injury to the patient; and 3d. The necessity of keeping up extension and counter-extension continuously till the resistance of the muscles are overcome, or while the strength of the patient will permit, before giving up our effort.

Enlistment of Seamen and Examination of Recruits. By G. R. B. Horner, M. D., Philadelphia, Surgeon U. S. Navy.

The importance of this subject must be apparent to every reader, and I shall not enlarge upon it, but go on to speak of the most interesting parts. By the term seamen we mean all persons who enlist for the naval or merchant service, whether boys or men—mere landsmen, or sailors who have become more or less perfect in their trade. We also include in the term all persons serving in other capacities, on board ships of war or merchantmen, whether impelled by sails or by steam—and, we may now add, by heated air. By the term recruits we mean not only seamen of any grade, but marines, engineers, warrant and commissioned officers, &c., of any kind, who are subject to the inspection of surgeons and physicians, privately or publicly, for land or sea service, in our navy, army, volunteer and militia service. To every medical man the duty of inspecting such persons is liable to happen, and to him is left the decision, whether they be fit or unfit for service, either before or after enlistment; and he may be called on to reinspect recruits seeking discharge, or deemed mentally or corporeally unfit for service by their commanders. Frequently friends and relations may be the applicants for their discharge, and claim it on account of their ill health, when no other good reasons can be urged. It is very common for recruits to give most favorable accounts of themselves, to get enlisted, and, after admission into service, to become despondent, from loss of natural or artificial excitement—to regret what they have done, for various reasons, and feign or really deem themselves incompetent to discharge the duties required of them. The next act is to interest friends to get them discharged. To effect this many means are adopted, but none so willingly and conveniently as those intended to impose on the doctor, or to convince him that either he or some other medical man had overlooked certain defects at the recruit's admission into service. It becomes then necessary for the inspector to keep all his senses awake, to prevent imposition, professionally, upon himself, to do justice to those inspected, and above all to secure for public or private employment men who are competent in mind and body to discharge their duties. The passing of an

incompetent person may please him and his friends, but injure the service in which he engages, and cause a fine to be imposed, much to the damage of reputation and mortification of the inspector, as in an instance related to me by a commander of our navy. An Englishman, shipped for the naval service, feigned lameness in one of the lower extremities, and to substantiate his assertions of disability—even before he got to sea—exhibited a huge scar upon it. A survey of him was ordered—the above and several other officers were ordered for that purpose—at Norfolk, and believing the man lame, they pronounced him "unfit for service," and recommended his discharge from it to the Secretary of the Navy. He accordingly directed it to be done, and the surgeon, most unjustly, to be mulcted in the sum advanced as pay, which is generally for three months. The order was promptly obeyed—the seaman was regularly discharged from the navy—a boat took him ashore, and no sooner had it touched the beach than he leaped on land, jumped into the air with joy and exultation, made a most insulting exclamation and gesture at the boat's crew, and ran into town as actively as any man in the ship could have done. One of my earliest recollections is of a like survey of a soldier in a militia regiment encamped at my native place, and on their way to defend the State against the invasion of the English, infesting with their fleet the lower counties of Virginia. This feigned invalid, however, was not so successful as the above. He had a very sagacious, old and experienced country physician, residing in the adjacent village, to deal with him. He was not to be fooled, and required ocular demonstration. The soldier, therefore, had to pull down his trowsers, to exhibit the rupture complained of. The doctor could find none—swore he was as sound as himself, and refused a certificate. However, the man got his discharge, though in a dishonorable way, for he was ordered to leave the camp, and was disgraced by being marched through the entire length of the village, with a drummer and fifer playing the rogue's or some other degrading march, and a crowd of boys hooting at his heels. To avoid similar impostures to the one first mentioned, and to be able to prevent the successful attempt of any individual making one like the second, or to keep out of employment persons physically unsuited for it, I will now

mention the general rules adopted by myself and others, and which I recommend after the inspection of more than two thousand persons within the last eight years, without counting many straggling cases examined by me while not engaged regularly in the recruiting service, and likewise exclusive of many hundreds inspected anterior to that time, in active service, and while attached to the U. S. Rendezvous in 1834, '35 and '36.

To secure the government against the introduction of physically unfit persons into the naval service, the rule adopted there is for the officers of the line to refer them for physical examination to the surgeon, after they have been found in other respects suitable. If he pass them, he gives printed certificates of his having found them fit for the naval service, and on the same one writes a description of them, viz.: of their "birth-place, age, color of the eyes and hair, complexion, trade, height, marks of vaccination, &c., and the number of years they have been at sea and in service." When the surgeon has finished these certificates and signed them, one of the other officers fills up the blank orders at the foot, for the recruits being taken on board the receiving vessels. They are then, if sailors, generally given several days' liberty, and retire with their landlords, after these have taken the certificates and become their security. For this and money advanced they charge a large per centage. The recruits having had their frolic, if sober enough, are, at the expiration of their liberty, delivered on board, with the clothing and bedding required, and re-examined by one of the medical officers attached to the station. To avoid any ill feeling which might result from a recruit's being rejected by him, the junior medical officer, Passed Assis't Surgeon J. O'C. Barclay, first re-examines, and if he should find the recruit unfit for service, is required to return him to the Rendezvous and report the defect found. Should the surgeon there still deem him fit for service, the recruit has to be referred to myself, who give the casting vote after a third examination. But such is the strictness of the first one, that this is rarely necessary; and it is surprising, considering the excesses into which the recruits engage before their delivery on board.

For the marines enlisted on this station there is only one examination, which is made by myself or assistant, according to

the time of the day when they present themselves. But all the candidates—as officers of the Engineer Corps—who attended the late examination here, had first to be inspected by me, and to get their orders endorsed with a certificate of their having been examined and passed physically. Of the first I made a general examination, with as little exposure of the person as possible, as they all had a gentlemanly appearance; but having understood from a member of the Board of Engineers that one had been at a former session rejected for rupture, I was more strict with the last examined, and in addition to a written declaration of their soundness, which was read to them for their assent, I omitted nothing thought requisite to detect important defects, though on examination of the above candidate no rupture could be found; and he only had an unnatural depression of the sternum, which was not deemed a sufficient cause for rejection. The form of declaration referred to was this:

"NAVY YARD, Philada., May, 1853.

"I hereby certify that my health is robust; I am free from scrofula, consumption and other hereditary diseases; that I am not suffering from epilepsy, stricture, rupture, or other complaints and injuries, and feel myself able to perform any physical duties required of me as an engineer. All my senses are perfect."

To the physical as well as mental qualifications of engineers, great importance is attached, as their duties are very arduous. They have to undergo great exposure to heat about the engines and fires; they labor hard—watch long and frequently—have use for the nicest and most accurate sense, especially of sight and hearing, in the detection of defective machinery, and are more constantly in active service, it is thought, than any other grade of officers. Acting on a knowledge of these facts, I was under the unpleasant necessity of rejecting three out of thirty-one for defective eyes: one person had a perfect opacity of the left one, and two of them were near-sighted. Nevertheless, one of these procured influence enough to be examined professionally. If, then, he should get into service, and from inability to see a flaw in a steam boiler or other machinery, a disaster should happen, let not the blame rest on his medical inspector.

Of candidates for entrance into the medical corps of the navy,

physical perfection is also required; and besides undergoing a satisfactory examination to ascertain that, each candidate has to give a certificate similar to the one quoted. That all persons interested may be fully aware of the requirements demanded, I will state that no one is professionally examined before he has undergone a satisfactory personal inspection, and signed this certificate of "Physical Capacity."

"*Philadelphia*, 1853.

"I declare on honor, that my health at this time is good and robust, and to the best of my knowledge and belief I am free from constitutional defects, and without any predisposition to epilepsy, phthisis pulmonalis, gout or chronic disease of any kind. I have neither circocele, stricture of the urethra, hemorrhoids, nor hernia. Each and all my organs of sense are without imperfection.

"*Candidate for the Office of Assistant Surgeon in the Navy of the United States.*"

Had one of the candidates who appeared before the late Board of Naval Surgeons been aware, previously to his leaving home, that such a certificate as this was required, he might have been saved from the fatigue and expense of a very long journey from the West. That other candidates for the corps may not suffer similarly, their attention is called to these facts and to the following "General Order:"

"*Navy Department, December* 13, 1852.

"It being desirable to obtain the best professional ability which may offer, for the Medical Corps of the Navy, the Department directs:

1st. That hereafter annual Boards shall assemble, at such place as may be designated by the Department, about the close of the lecture seasons of the Colleges, for the selection of candidates for admission into the Medical Corps of the Navy.

2d. Each Board will select from qualified candidates, such a number of the best as may be necessary to meet the demands of the service for the following year.

3d. As vacancies occur in the Medical Corps of the Navy, appointments will be made from the qualified candidates in the order of succession in which they may be named by the Board; but no appointment will be given to any such candidate who is over 25 years of age.

4th. No qualified candidates will be held over for appointment after one year, but all such must be re-examined and take position in the class in which they are last examined.

5th. Every candidate for admission will be examined, strictly and carefully, as to his physical capacity for the service, and the Board will make a separate report in each case, which will be forwarded *direct* to the Department, to be placed on file with the testimonials of the candidate. This examination will precede that as to professional qualifications, and no candidate who is not physically qualified will be examined professionally.

6th. In detailing Boards for the examination of Assistant Surgeons for promotion, as far as practicable, a majority of the members who have served on the Board next preceding, will be selected, in order that the relative position of Assistants of the same date, who have been examined at different times, may be more readily determined.

JOHN P. KENNEDY, Secretary of the Navy."

It may be likewise useful to state that candidates for the corps of midshipmen, previously to their admission to the naval school at Annapolis, must undergo a satisfactory physical inspection by two surgeons appointed for the purpose.

With regard to that of ordinary recruits, as seamen and marines, not so much delicacy is observed as with officers. Every man or boy is entirely stripped of his clothes, a close scrutiny is made of his whole person, and every question is put which may serve to detect natural or acquired defects. To enable the inspector to examine without making omissions, it is best for him to write down all leading questions; if he should not, he may fail occasionally, by omitting some, to detect serious defects—to make the government or employers liable to impositions on account of injuries received anterior to entrance into service—and to admit very useless and annoying persons, such as those affected with stricture in the urethra, piles, fistula, neuralgia and incontenence of urine while asleep, which on board a man of war or other crowded vessel is a great nuisance, from the fœtid condition in which the clothes and bedding of the invalid suffering from it are kept. Equal annoyance may be occasioned by the fœtid exhalations given off by the breath or feet of some individuals—and they ought to be rejected, though perfectly able to perform the duties required of them—as they corrupt the air, and prevent others from the performance of theirs. To put the recruit at ease and compose him,—for a young one is very apt to become agitated and nervous,—affability and kindness of manner should be observed; and he should be questioned on general subjects, by which his sanity of mind may be learned, and that his general condition of health anterior to

his application for enlistment may be discovered. When he has become composed he should be made to pace backwards and forwards in a spacious room, that the movements of his joints may be observed; he should stand first on one foot then on the other, raise them to a horizontal position alternately, and cast each one backwards as high as possible. The hands and arms should perform like evolutions; the shoulder joints, clavicular junctions, elbows, wrists and fingers be inspected, to find out anchylosis and want of proper flexure, from this or luxation. The loss of a thumb or index finger, deformed feet, toes interfering with walking, varicose veins, signs of scorbutic and scrofulous affections, marks of large ulcers, white swelling, carious bones and deficient muscular development, smallness of size disproportioned to age, symptoms of anæmia, unnatural palor and sallowness, palpitations of the heart continued after the candidate's mind is composed, a very frequent, full and strong pulse in the same condition, I consider causes for rejection. But this, in the above instances and others, must be in a measure governed by length of service, mental or professional qualifications, and the specific duties to be done. A man who could not run aloft, up the shrouds, furl a sail, or clamber up a ledge of rocks, and leap beyond an enemy's trench, might make himself very useful below in working a gun or standing guard. The same remarks will apply to the merchant and militia service.

That no oversights or omissions may happen, I recommend system to be observed in examining the different parts and organs of every recruit, beginning with his head and descending to his feet; and that the inspector ascertain the healthy or unhealthy condition of his various tissues. His scalp should be felt, pressure made upon the cranium to discover fractures, depressed and deficient bones; the hair ought to be raised to find tinea capitis and other affections. The senses should be tested, particularly those of sight and hearing, the mouth and teeth inspected, the chest sounded, the abdomen, in its whole extent, be felt and pressed upon, the recruit made to speak, to find out whether he stammers, stutters, or has unnatural tone of voice; and when stricture of the urethra is suspected, he ought to be required to urinate or to undergo the introduction of a bougie.

But this and other disagreeable examinations are objected to

by recruits, deter them from offering for inspection, and should never be wantonly performed. Even the nudity demanded of them is offensive to some, and I have known several to refuse to strip, and decline enlistment before they would submit to it. In examining the groins and genital organs, special care is to be observed that a rupture be not concealed by being thrust up just before examination, and that a chancre or bubo, either forming, or in the last stage of suppuration, may not be overlooked, or a gonorrhœa may not escape notice. In shipping boys and landsmen, who are mostly superabundant, and can be had at all times plentifully, the latter complaints are good reasons for rejection; but in men who are well drilled, or good sailors, who are always scarce, they are not so, and it is better that these should be taken and cured if it can be effected in a short time. By such indulgence very valuable men may be got or retained in service, and kindness and humanity practised to those who have an additional claim on it from their good conduct and great efficiency. But in these cases the inspector must be in a measure governed very much by the certificate he has to sign—for they differ greatly in purport—and it was in consequence of the one used at the Philadelphia rendezvous, when I went on duty there in October, 1845, being too stringent and preventing me from exercising due discretion or indulgence, that I urged its revocation, and had introduced the present one, which simply states that the recruit—setting forth his name and rank—has been examined and found "fit for the naval service," instead of stating that he is free from bodily defects, as is done in the certificate given each marine enlisted on this station. In many instances I have had the alternative of signing what was not true, as regards defects, or of rejecting desirable men; and to avoid this, I have had several times, with the assent of the commander of the guard, to insert exceptions by writing the defects forming them on the printed certificate. In consequence of such cases, the medical examiner may offend the candidate, dissatisfy the person who wants his services, delay the formation of a regiment, or prevent the early equipment of a ship or squadron. For notwithstanding the change effected by me in the certificate at the rendezvous, I rejected between 10 and 11 per cent. of applicants, or nearly 200 out of 1828, examined

by me while last on duty there—that is, including some examined by others while I was absent and on a Board of Examiners. The sum total of rejections in 2010 inspected was 209, or more than 10 per cent. Of these cases, eleven were rejected for varicose veins of the legs, the same number for varicocele, twenty-five for circoceles on the left side without exception to the best of knowledge, thirteen had myopia, nine ophthalmia, five blindness of the left eye, ten imperfect forms, fourteen various cutaneous eruptions, eight diseased heart, nine debility from old age, &c., one was ruptured in the right groin, and nine had been in the left one. For this fact we cannot account, unless by ascribing it to the great expansion of the left abdominal rings—from the larger size of the left spermatic veins than that of the right ones.

Besides the complaints and injuries mentioned as just causes of rejection, we may enumerate contagious, pulmonic and cardiac affections generally, acute and chronic rheumatism and ophthalmia, diseases of the chylopoietic viscera, intestinal, herpetic and other cutaneous affections, secondary syphilis, bronchocele, epilepsy, palsy, spinal deformity or disease, intermittent or other fevers, great loss of teeth and caries of them, and malformations of the body and limbs, debility, great emaciation or exorbitant fatness; in fine, *any complaint* or injury which might excuse a man from military duty, or be urged as a reason for his discharge from it or naval service, as it is very common for such men to get into it, to become dissatisfied and procure their return home or discharge because of these defects.

As has been shown above, of the recruits rejected by me, the largest number were affected with circocele of the left side, varicocele, varicose veins of legs, ophthalmia, myopia, and cutaneous eruptions. Of all examined, whether passed or not, a catalogue was kept and memoranda made, especially of those rejected, as after the lapse of a long time, and when it seemed probable that they were forgotten, some would make another attempt to get into service. Notes upon such persons are not only useful to the one who takes them, but to the officers who succeed or relieve him. These being unsuspecting and uninformed respecting defective applicants, might allow some to be enlisted who might prove incumbrances and nuisances, and utterly worthless, as well

from ill health and injury as from bad habits, especially that of confirmed drunkenness, which may have not only undermined their constitutions, but rendered them unfit for any kind of service, by the irregularities it produces, and by the constant tendency it gives to violations of discipline. Concerning the utility of memoranda being kept it may be proper to add, that they afford good statistics of the height, age and diseases of recruits; and moreover enable the inspectors to identify those who have already been enrolled, have failed to enter service at the expiration of their liberty, or, having done so, have deserted or been dismissed as invalids, and endeavor to get re-enlisted for the sake of another bounty or advance of wages. Two instances of such attempts at imposition have come under my own knowledge on this station; and in both of them my recollection of the impostors, assisted by my notes, enabled me positively to recognize them and prevent imposition.

BIBLIOGRAPHICAL NOTICES.

Elements of Chemistry; for the use of Colleges, Academies and Schools. By M. V. REGNAULT. *Illustrated by nearly* 700 *wood cuts.* Translated from the French by T. FORREST BETTON, M. D., M. A. N. S., Fellow of the College of Physicians, Philada., &c., and Edited, with notes, by JAMES C. BOOTH, Melter and Refiner, U. S. Mint; and WILLIAM L. FABER, Metallurgist and Mining Engineer. Second Edition; Philada., Clark & Hesser; 1853. 2 vols. oct. pp. 1475.

In the last number we had occasion to speak of Löwig's Organic Chemistry. We now are called on to notice a chemical work of quite a different stamp. M. Regnault has for several years occupied a very favorable position among the scientific men of Paris, owing to his valuable investigations and discoveries in various of the higher departments of chemical research. His mind appears to have a practical direction, and in the work of which the above is the title page, he has exhibited this trait by bringing in numerous applications of his favorite science to the useful and ornamental arts and manufactures. In glancing

over the pages, we perceive that the chemistry of the imponderables, usually occupying much space, has been omitted as a separate treatise, and that crystallography is largely dilated upon, with numerous excellent wood cuts, illustrating the several systems of crystals. Arsenic is placed among the non-metallic bodies at the side of phosphorus, a change of position which many chemists seem disposed to effect, although it is usually spoken of and described as a metal.

In the chapter preliminary to the metals, M. Regnault has introduced a short account of the geological structure of the earth's crust, with numerous cuts exhibiting stratification, metallic veins, etc. This is followed by a discussion of the general characters and formation of salts, in which the author takes the ground that those substances only should be considered salts which consist of two binary compounds, one of which acts as an electro-positive element or base, and the other in an electro-negative manner as an acid. Hence, he ejects the chlorides, iodides, etc. from the list. The solubility of salts is treated of in great detail, with a copper plate engraving, exhibiting the curves of solubility of the more important salts. The first class of metals includes those of the alkaline, alkaline earthy, and earthy bases; among the special notices we may mention those of the preparation of potassium, alkalimetry, nitrate of potassa and borate of soda; the manufacture, testing and analysis of gunpowder; building materials, cements and mortars; the glass manufacture and the several kinds of pottery. The metallurgy of the several important metals of the second class is introduced, and thoroughly illustrated with engravings. The steel and bronze manufacture, cannon casting, electro-plating and gilding, etc., are among the special notices.

The organic department is preceded by an elaborate account of proximate and ultimate organic analysis, the method of ascertaining formulæ, the plan of determining the acid, basic and neutral substances, and the methods, precautions and calculations necessary in ascertaining the specific gravity of the vapors and other physical properties of volatile organic bodies.

M. Regnault has not treated the chemistry of organic bodies so fully as the other department. His views appear unfavorable to the radical theory, yet they were published before the recent

discoveries of Frankland and Kolbe, which have given so much probability to that view of organic constitution. He has not attempted a scientific classification;—commencing with the hydrates of carbon and their derivatives by the action of acids and ferments, and concluding with an account of animal chemistry and the principle manufactures of organic products, such as bread making, brewing, fermented liquors, the preparation of sugar from the beet and cane, of bone-black, charcoal, leather and illuminating gas.

The original work is in four duodecimo volumes; as now presented it is embraced in two large octavos of 700 and 800 pages. The beautiful wood cuts of the original are, in most instances, well copied, the letter press is large and distinct, and the paper good. Dr. Betton has given a fair and lucid translation, free from idiomatic peculiarities. The Editors have given proof of a careful revision. They have expressed the temperature by Fahrenheit's scale, and have adopted the hydrogen scale of equivalents, which will add much to its practical usefulness. On the other hand they have left the decimal weights and measures. The attempt at rendering these would have lost its value in the constant recurrence of fractions, as expressed in the English system.

The Editorial additions are in the form of foot notes, some of which are particularly useful. Mr. Faber has very properly given an exposé of the recent isolation of compound radicals; and among the notes of Prof. Booth we observe one on the process for refining of gold in the U. S. Mint.

On the whole, we cannot but deem the publication of Regnault's Chemistry a valuable addition to the chemical literature of the United States, as a book which should be within reach of every chemist, and calculated to be of essential service to artists and manufacturers.

The Action of Medicines in the System; or "On the Mode in which Therapeutic Agents Introduced into the Stomach produce their Peculiar Effects on the Animal Economy." By FREDERICK WILLIAM HEADLAND, B. A., M. R. C. S., &c. Philadelphia: Lindsay & Blakiston, 1853, pp. 560.

This monograph is a *Prize Essay*, "to which the Medical Society of London awarded the Fothergillian Gold Medal for MDCCCLII," and we feel little hesitation in saying, that it is the most thorough, masterly, and scientific exposition of the state of medical knowledge on the important topic treated, that has ever appeared. The subject to which the Essay was written is, "On the mode in which Therapeutic Agents introduced into the Stomach produce their peculiar effects on the animal economy." It is treated by the author in a series of distinct propositions, which he lays down and endeavors to demonstrate after the manner of mathematical theorems. We quote, as perhaps affording the best insight into the subject matter of the book, the author's series of *propositions* at length.

"*Prop.* I.—That the great majority of medicines must obtain entry into the blood, or internal fluids of the body, before their action can be manifested.

Prop. II.—That the great majority of medicines are capable of solution in the gastric or intestinal secretions, and pass without material change, by a process of absorption, through the coats of the stomach and intestines, to enter the capillaries of the portal system of veins.

Prop. III.—That those medicines which are completely insoluble in water, and in the gastric and intestinal juices, cannot gain entrance into the circulation.

Prop. IV.—That some few remedial agents act locally on the mucous surface, either before absorption, or without being absorbed at all. That they are chiefly as follows:

a. Irritant Emetics.

b. Stomach Anæsthetics.

c. Irritant Cathartics.

Prop. V.—That the medicine, when in the blood, must permeate the mass of the circulation, so far as may be required to reach the parts on which it tends to act.

That there are two possible exceptions to this rule:—

a. The production of sensation or pain at a distant point.

b. The production of muscular contraction at a distant point.

Prop. VI.—That while in the blood the medicine may undergo

changes, which in some cases may, in others may not, affect its influence. That these changes may be—

a. Of Combination.

b. Of Reconstruction.

c. Of Decomposition.

Prop. VII.—That a first class of medicines, called Hæmatics, act while in the blood, which they influence. That their action is permanent.

1. That of these some, called Restoratives, act by supplying, or causing to be supplied, a material wanting; and may remain in the blood.

2. That others, called Catalytics, act so as to counteract a morbid material or process; and must pass out of the body.

Prop. VIII.—That a second class of medicines, called Neurotics, act by passing from the blood to the nerves or nerve centres, which they influence. That they are transitory in action.

1. That of these some, called stimulants, act so as to exalt nervous force, in general or in particular.

2. That others called Narcotics, act so as first to exalt nervous force, and then to depress it; and have also a special influence on the intellectual part of the brain.

3. That others again, called Sedatives, act so as to depress nervous force, in general or in particular.

Prop. IX.—That a third class of medicines, called Astringents, act by passing from the blood to muscular fibre, which they excite to contraction.

Prop. X.—That a fourth class of medicines, called Eliminatives, act by passing out the blood through the glands, which they excite to the performance of their functions."

These propositions the author considers the foundation of the Essay, and in the "Superstructure" which he has raised upon them, he has, in our opinion, most fully made good his claim of having "stated about as much of the general principles by which medicines operate as seems to be capable of distinct proof."

The classification adopted, is based upon an exclusion of external or topical agents, among which, we presume, the author would place *Anthelmintics.*

He arranges medicines into "four great groups, the action of each of which is well marked and distinct. The first class acts in the blood; and as a large number of diseases depends on a fault in that fluid, we may by their means be enabled to remedy that fault. They are the most important of all medicines. They are called Hæmatics, or blood medicines. They are used chiefly in chronic and constitutional disorders. But a second class of remedies are temporary in their action. They influence the nervous system, exciting it, depressing it, or otherwise altering its tone. They are chiefly useful in the temporary emergencies of acute disorders. They can seldom effect a permanent cure, unless when

the contingency in which they are administered is also of a temporary nature. They are called Neurotics, or nerve-medicines. A third set of medicines, less extensive and less important than the others, acts upon muscular fibre, which is caused by them to contract. Involuntary muscular fibre exists in the coats of small blood-vessels, and in the ducts of glands. Thus Astringents, as these agents are called, are able, by contracting muscular fibre, and thus diminishing the calibre of these canals, to arrest hæmorrhage in one case (when a small vessel is ruptured) and to prevent the outpouring of a secretion in another case.

The fourth class is of considerable importance. Some medicines have the power of increasing the secretions which are formed from the blood by various glands at different parts of the body. By their aid we may be enabled to eliminate from the blood a morbid material through the glands; or we may do great good by restoring a secretion when unnaturally suppressed. They are called Eliminatives. Like Hæmatics, their influence is more or less permanent. That of Neurotics and Astringents, particularly the former, is transient."

In allusion to this classification we may be perhaps allowed to say, that it coincides in its great divisions with one adopted in a little work by one of the editors of this journal, with the single exception of the assignment of *Astringents* to an independent class.

Our limits of course forbid a critical analysis of the various subdivisions or orders, into which these principal groups are broken up. Many novel, striking, and ingenious views are presented in the examination of these minor divisions and of some of the more important of the individual articles of the Materia Medica. These theories the author modestly admits to be "the weak points of the Essay."

But in thus boldly venturing upon a path of exploration from which medical inquiry has so long shrunk with unaccountable timidity, Dr. Headland has done good service. For, certainly, in no branch of medicine is there now the same field for progress as in the advancement of our knowledge of the action of medicines, and of their operation in the cure of disease. Is it not, indeed, surprising, that with the rapid perfection of pathology and diagnosis which has been accomplished within a few years past, so little should have been done to rescue Therapeutics from the doubt and uncertainty with which it has been so long connected!

THE MEDICAL EXAMINER.

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PHYSICIANS FOR EMIGRANT SHIPS.

We were glad to meet with the following article in the editorial columns of the Pennsylvania Inquirer of this city. The importance of the matter commends it to all classes of the community, and we are rejoiced to see at least one of the daily papers independent enough to urge a course which, although attended with expense to shippers, must greatly advance the cause of humanity.

PHYSICIANS FOR EMIGRANT SHIPS—A GOOD SUGGESTION.—We perceive, upon looking over the Report of the Committee appointed by the American Medical Association, to memorialize Congress in favor of a law requiring every emigrant ship to have a surgeon on board, that the subject will be taken up at the coming session. It is to be hoped that the proposition will then be approved. The introduction of surgeons into all emigrant vessels, would be the means of saving many lives, while the towns and cities where emigrants are landed, would thus be largely protected against the small-pox, ship fever, and other fearful diseases. The voice of humanity is in favor of such a measure, whether we allude to the poor emigrant from abroad, or the citizen at home. It is little less than murder to fill a ship with emigrants, and thus to foment disease and promote death. The thanks of the country are due to the American Association for its energetic efforts on this interesting subject. We are all, more or less, vitally concerned in the application. The Physician on ship-board would combat the disease every inch of the way across the ocean, and by strict attention, diet, medicine and purification, would do much towards fitting the vessel to approach towards the healthy shores of the Republic. The ship fever is a dangerous disease. It requires much heroism to face, brave, and contend with it. No physician can *desire* such practice, and hence it is nothing but a conscientious sense of right and duty, that will induce a member of the medical profession to live among such patients, at sea or on land. But this sense of duty everywhere prevails, and it is an honor to the calling and to human nature. There is also another reason why such vessels as we have referred to should have surgeons. It is this: By close and constant attention to the multitude of cases that occur in crowded vessels, the physician would daily become more and more acquainted with the best mode of successfully treating ship fever, and thus of saving human life. How many medical gentlemen have already been carried off by this disease? It is, therefore, vastly important that it should be seen in all its phases, and then eventually it could and would be mastered just as certainly as our physicians now cure the intermittent fever.

The following handsome tribute to the medical profession appeared in the same paper shortly after the above, for which the author justly deserves, and should receive their warmest thanks:

PHYSICIANS—THEIR DUTIES AND THEIR LABORS.—We recently gave some extracts from the last Annual Report of the Medical Society of Pennsylvania—one of the most enlightened and benevolent bodies of the day. Our object was to show with what commendable zeal the members of the Medical Profession were laboring in the cause of humanity. All their efforts tend to the health and happiness of our race. What a vast volume of knowledge do they open up, for the examination and consideration of the intellectual and gifted in all parts of the world!

The Doctor is not only a prescriber for the sick or wounded, but he is a Botanist, a Chemist, a Geologist and Mineralogist—aye, everything. There is no *leaf* in any book of science, that he does not carefully study, with the view of bringing to the bedside of his patients something that can aid him in curing disease.

The Medical Profession is emphatically the *learned* profession. Nor do its members become weary in well doing. Every year they assemble in some of our large cities, to compare notes with one another, and to discuss what has been discovered within the preceding year. What able Reports are there made and distributed throughout the nation!

The annual publications of the American Medical Convention teem with profound intelligence upon the improvement and advances in their great art. Nor do they ask any pecuniary assistance from the other classes of society to meet their expenses in journeying to or remaining at their intellectual gatherings.

These are not the ordinary conventions of the day. They meet for the noblest and best of purposes—to smooth the pathway of man through this stormy wilderness of life. Like their great Master, who went abroad healing the sick and cleansing the lepers, they are endeavoring to walk in his benevolent footsteps. And when the last summons must come, how often are they the only persons capable of giving consolation to the dying, as the soul takes its departure from its clay tenement, and wings its way to immortality!

What vast interests are committed to their hands! and we think we may say right justly—for we know of no body of men who peril more in the cause of humanity. Pestilence cannot scare them, nor does squalid poverty pass neglected by them. We have all seen them take their lives in their hands, in performing the high duties committed to their trust. We may well say, therefore, that we most sincerely thank the members of that noble profession for their constant study to advance the science they so eminently honor. Their Conventions are, in truth and in fact, Conventions *for* us, for the elevation of suffering humanity, for we all belong to that vast brotherhood.

DR. E. BROWN-SEQUARD.

This distinguished physiologist leaves the United States, to return to Paris, on the 30th of July. We are desired to announce that he will

take charge of and transmit any books, pamphlets or communications for the "*Societé de Biologie*" of Paris. His address is No. 17 University Place, New York.

He will carry with him the best wishes of the many friends whom he has made during his residence in this country.

MEDICAL NEWS.

MEDICAL GRADUATES IN 1853.

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QUACKERY IN PARIS.—A case of some interest came the other day before the Correctional Tribunal. A medical man, named De Bonnard, was cited for acting illegally in administering to his patients medical preparations of a composition not set down in the codex. It appeared from the evidence, that in consequence of information given to the police, a search was made in December at the residence of Dr. de Bonnard, and a small box was seized there containing 160 little glass bottles of various medicaments, and 1350 little glass tubes filled with white globules. The object of these preparations was to enable the medical man to administer his remedy to the patient on the instant. An analysis has proved that these preparations were not in accordance with anything set down in the codex, and in consequence Dr. de Bonnard was accused of practising medicine in an illegal manner, and of selling secret reme-

dies. The court decided that there was nothing to prove the latter count of the charge, but that there could be no doubt as to the former. Dr. de Bonnard was then sentenced to pay a fine of 100 francs.—*Dublin Med. Press*, from *Galignani's Journal.*

LIST OF DELEGATES IN ATTENDANCE, AT THE MEETING OF THE AMERICAN ASSOCIATION,

Held in N. York, 3d, 4th and 5th May, 1853.

* Killed by the catastrophe at Norwalk.

Maine.—John Benson, Chas. S. D. Fessenden, Alonzo Garcelon, Isaac Lincoln, James McKean, E. R. Peaslee, T. G. Stockbridge.

New Hampshire.—*Josiah Bartlett, Dixi Crosby, Josiah Crosby, G. W. Garland, Luther M. Knight, Alvah Moulton, Edw. H. Parker, E. R. Peaslee, Nath. Sanborne, A. Smalley, Albert Smith, W. P. Stone, E. K Webster.

Vermont.—Chas. L. Allen, H. B. Brown, E. S. Carr, C. H. Cleveland, Earl Cushman, C. L. Ford, Selim Newell, A. T. Woodward.

Massachusetts.—Nathan Adams, Z. B. Adams, Ebenezer Alden, Nathan Allen, John B. Alley, George Bartlett, Lyman Bartlett, Jonas W. Bemis, Henry G. Bigelow, J. Nelson Borland, Thos. R. Boutelle, H. I. Bowditch, Jonathan Brown, Charles H. Browne, S. G. Burnap, Ephraim Buck, E W. Carpenter, Thos. L. Chapman, George Choate, Henry G. Clark, Moses Clark, Daniel T. Coit, Clarkson T. Collins, Charles A. Davis, Lemuel Dickerman, Hanover Dickey, Wm. Dickinson, Calvin Ellis, J. Farnum, Samuel A. Fisk, Calvin T. Fiske, Edward Flint, Geo. H. Gay, Augustus A. Gould, *James H. Gray, John Green, Robert Greer, Benj. F. Heywood, Alfred Hitchcock, C. C. Holmes, O. W. Holmes, Charles D. Homans, R. W. Hooper, Daniel Hovey, Charles F. Jackson, John Jeffries, J. P. Jewett, N. C. Keep, Gilman Kimball, Wm. D. Lamb, Erasmus D. Miller, Josiah Noyes, James M. Nye, J. W. D. Osgood, Thaddeus Phelps, *A. L. Peirson, Edward Reynolds, Samuel Richardson, Ira Sampson, Augustine Shurtleff, Benj. F. Smith, *James M. Smith, Seth L. Sprague, Henry O. Stone, D. H. Storer, Daniel Thompson, S. D. Townsend, E. G. Tucker, Charles E. Ware, J. C. Warren, J. M. Warren, Moses W. Weld, Wm. G. Wheeler, Vassel White, Wm. C. Whitmilge, Adams Wiley, H. W. Williams, Edward Worcester, Wm. Workman.

Rhode Island.—Hiram Allen, S. Augustus Arnold, Richmond Brownell, George Capron, Sylvanus Clapp, Hiram Cleveland, Theophilus C. Dunn, Ezekiel Fowler, David King, Lewis L. Miller, I. Mauran, Charles W. Parsons, Usher Parsons, Henry W. Rivers, Edwin M. Snow

Connecticut.—Rufus Baker, A. W. Barrows, *Samuel Beach, Sheldon Beardsley, L. N. Beardsley, H. N. Bennett, S. C. Beresford, E. H. Bishop, G. G. Bissel, D. E. Bostwick, Henry Bronson, Clarence M. Brownell, Wm. B. Casey, B. H. Caslin, Andrew Castle, Samuel Catlin, Jr., F. L. Dickinson, Johnson C. Hatch, Roswell Hawley, Charles Hooker,

Worthington Hooker, Robt. Hubbard, Samuel Hutchings, A. M. Huxby, Nathan B. Ives, P. A. Jewett, Jonathan Knight, Elijah Middlebrook, A. Moody, Nathan P. Pike, Gurdon W. Russel, F. W. Shepard, Alvan Talcott, *Archibald Welch, Benjamin Welch, R. A. White, Datus Williams, Orson Wood, William Wood, Ashbel Woodward, S. Woodruff.

New York.—John G. Adams, Lucius H. Allen, James Anderson, James H. Armsby, John H. Arnold, David F. Atwater, James M. Austin, Daniel Ayres, M. N. Babcock, John Ball, B. Fordyce Barker, J. P. Batchelder, William Bay, E. L. Beadle, Wm. H. Beardsley, Seneca Beebe, A. G. Bigelow, Wm. N. Blakeman, Thos. W. Blatchford, James C. Bliss, S. V. R. Bogert, Jackson Bolton, Reed B. Bontecou, J. H. Borrowe, Sumner Ely, John T. Ferguson, Austin Flint, C. L. Ford, Joel Foster, S. Consant Foster, John W. Francis, A. K. Gardner, J. P. Garrish, Anthony Gescheidt, C. R. Gilman, Caleb Green, Horace Green, Isaac Greene, John H. Griscom, F. H. Hamilton, Elisha Harris, John Hart, Charles Henschell, James Hibben, Richard K. Hoffman, S. T. Hubbard, Frederick Hyde, Ferris Jacobs, Charles G. Pomeroy, James O. Pond, Alfred C. Post, J. Purdy, S. A. Purdy, S. S. Purple, C. H. Raymond, D. M. Reese, J. H. Reynolds, T. B. Reynolds, Wm. Rockwell, L. A. Sayre, A. L. Saunders, Earnest Schilling, Albert Smith, Charles D. Smith, Joseph M. Smith, Horatio S. Smith, Stephen Smith, Simeon Snow, Thomas Spencer, J. S. Sprague, B. P. Staats, F. Campbell Stewart, Thomas C. Brinsmade, P. B. Brooks, Gurdon Buck, Wm. P. Buel, Henry D. Bulkley, Wm. C. Butler, George N. Burwell, G. P. Camman, J. M. Carnochan, Edson Carr, Galen Carter, Jonathan H. Case, M. H. Cash, John C. Cheesman, H. S. Chubbuck, Wm. Henry Church, J. W. G. Clements, Thomas Cock, Thomas F. Cock, James Cockroft, A. B. Coe, James S. Cooper, John W. Corson, C. B. Coventry, Henry G. Cox, Richard O. Crandall, John C. Dalton, Jr., E. H. Davis, Edward Delafield, William Detmold, D. B. Devendorf, A. F. Doolittle, Henry S. Downs, Abram Dubois, *Wm. C. Dwight, Pliny Earle, H. N. Eastman, Wm. H. Jackson, J. Foster Jenkins, Harvey Jewett, F. U. Johnston, David T. Jones, Stephen S. Keene, R. S. Kissam, Jonathan S. Lawrence, B. C. Leveridge, Jared Linsly, John McCall, B. W. McCready, Ebenezer McFarlan, W. H. Macneven, James McNaughton, Leonard C. McPhail, Alden March, T. M. Markoe, Wm. H. Maxwell, John T. Metcalfe, John Miller, S. R. Millington, J. M. Minor, Henry Mitchell, R. C. Morris, Valentine Mott, Walter Mott, Peter Moulton, E. S. Nichols, Eugene O'Donoughue, Benjamin Ogden, Samuel J. Osborn, Andrew Otterson, Willard Parker, George A. Peters, James L. Phelps, S. B. Phillips, James Stewart, Philander Stewart, Alex. H. Stevens, Mark Stephenson, John O. Stone, John A. Swett, John Swinburne, Isaac E. Taylor, William Taylor, Alex. Thompson, A. G. Thompson, John Trenor, Henry Van Arsdale, Wm. H. Van Buren, Peter Van Buren, Sam. O. Vanderpoel, J. R. Van Fleck, M. D. Van Pelt, James Warren, John Watson, Robert Watts, Cyrus Weeks, H. S. West, Lewis C. Wheeler, James P. White, Devillo White, Oliver White, S. P. White, Charles H. Wilcox, Augustus Willard, Nelson

Winton, Isaac Wood, James R. Wood, Geo. F. Woodward, Joseph Worster.

New Jersey.—B. Rush Bateman, P. T. Brakely, A. E. Budd, Charles Butcher, S. W. Butler, J. W. Canfield, G. R. Chetwood, Henry J. Clark, L. Condict, Charles Cook, J. M. Cornelison, J. W. Craig, Alex. N. Dougherty, Franklin Gauntt, John Grimes, John B. Johnes, Samuel Lily, A. Linn, S. R. Millington, A. D. Morford, J. B. Munn, Sam'l H. Pennington, W. Pierson, John H. Phillips, Alex. W. Rogers, L. A. Smith, Othniel H. Taylor, Theodore R. Varick, A. F. Voorhies, John F. Ward.

Pennsylvania.—J. M. Allen, William Ashmead, John L. Atlee, Thomas F. Betton, C. H. Bibighaus, John B. Biddle, B. Bohren, Henry Bond, John B. Brinton, James Bryan, F. S. Burrows, Henry Carpenter, James S. Carpenter, J. Carson, P. Cassidy, Benj. H. Coates, D. F. Condie, Hiram Corson, M. R. Cryder, J. Augustus Ehler, Thomas Ellmaker, G. Emerson, Joseph P. Gazzam, Alex. K. Gaston, Traill Green, Edward Hartshorne, Isaac Hayes, Anthony Heger, Frank M. Heister, Charles Innes, Wilson Jewell, (Prof.) Samuel Jackson, Wm. V. Keating, William Keith, Alfred S. Kennedy, James W. Kerr, J. F. Lamb, R. La Roche, E. F. Leake, R. J. Levis, John Lowman, J. K. Mason, William Maybury, Charles D. Meigs, John K. Mitchell, S. N. Ogier, Joseph Pancoast, C. W. Parrish, Wm. A. Piper, John Ream, C. O. Richards, R. E. Rogers, W. S. W. Ruschenberger, John J. Reese, Francis R. Shunk, Francis Gurney Smith, Henry H. Smith, Robert K. Smith, Thomas Spencer, Alfred Stille, Moreton Stille, J. B. Stubbs, Isaac Thomas, R. H. Townsend, W. A. Van Buskirk, Isaac R. Walker, Francis West, G. W. Winley, Caspar Wister, Thomas H. Yardley, J. L. Ziegler, George J. Ziegler,

Delaware.—H. F. Askew, James Couper, J. F. Wilson.

Maryland.—Thomas E. Bond, Jr., C. C. Cox, Francis Donaldson, E P. Duval, Washington Duval, John R. W. Dunbar, Henry T. Goldsborough, E. M. Hardcastle, F. E. B. Hentze, Joel Hopkins, P. S. Kinnernon, G. W. Miltenberger, James Wynne, Robert Murray, D. A. O'Donnell, Wm. Riley, Joseph Roby, J. E. Snodgrass, Samuel Tyler.

District of Columbia.—S. C. Bersey, G. M. Dove, W. L. C. Du Hamel, Samuel W. Everett, Alex. T. B. Garnett, Harvey Lindsly, A. J. Semmes, John Fred. May, Thomas Miller, James E. Morgan.

Virginia.—Thomas P. Atkinson, James Bolton, John Dove, P. Claiborne Gooch, Theodore Goodloe, Carter P. Johnson, Charles R. Kemper, George A. Otis, C. R. Palmore, Wm. W. Parker, Alban S. Payne, J. F. Peebles, F. W. Rodney, John F. Sinton, P. Trent, J. Wistar Walke, Beverly R. Wellford.

North Carolina.—J. Graham Tull, N. J. Pittman,

South Carolina.—R. S. Bailey, B. W. Bradley, D. J. Cain, Dan. G. Crane, Joseph S. Crane, Henry R. Frost, Peter C. Gaillard, R. A. Kinloch, Robert Lebby, John May, Middleton Michael, James Moultrie, T. L. Ogler, Thomas G. Prioleau, Wm. T. Wragg.

Georgia.—Wm. Gaston Bullock, Henry F. Campbell, Thomas Hoey, G. M. Kollock.

Alabama.—J. A. English, Thomas J. Howell, G. M. Meriwether, Robinson Miller.

Louisiana.—J. Hancock Douglas.

Tennessee.—Zeno Harris, J. B. Lindsley, Charles K. Winston.

Kentucky.—T. S. Bell, C. J. Blackburn, Joshua B. Flint, D. L. Freeman, T. J. Moore, B. Silliman, Jr., L. P. Yandell.

Ohio.—J. D. Cotton, Jacob J. Delamater, Thos. W. Gordon, R. L. Howard, J. P. Judkins, John A. Murphy, R. D. Mussey, C. H. Raymond, Wolcott Richards, S. Hanbury Smith, N. E. Soule, D. Tilden.

Indiana.—Geo. L. Andrews, Wm. A. Clapp, Vierlin Kersey, Wm. Lomax, Geo. M. Maclean, Hugh Ronalds, C. Landon Rose, Joseph Somes, R. R. Town.

Illinois.—Daniel Brainard, N. S. Davis, Joseph C. Frye, Adams Nichols, A. B. Palmer, Rudolphus Rouse, H. Williams.

Missouri.—C. W. Hempstead, J. B. Johnson, E. S. Lemoine, C. A. Pope, Jas. R. Washington.

Michigan.—Josiah Andrews, F. K. Bailey, Aaron L. Leland, Isaac Paddock, T. Pitcher, Henry Taylor.

Iowa.—J. C. Hughes.

Wisconsin.—C. B. Chapman, H. Van Dusen.

Arkansas.——— Boreland,

California.—R. Stephen Harris.

Florida.—Thos. King Leonard, Geo. W. Betton.

U. S. Army.—R. H. Coolidge, J. M. Cuyler, Josiah Simpson.

U. S. Navy.—B. F. Bache, Ninian Pinkney.

Foreign.—Robt. R. Kelley (from Beyroot, Syria.)

R. M. McIlvaine and N. J. Pittman (from Medical Society of Paris.)

RECORD OF MEDICAL SCIENCE.

PATHOLOGY AND PRACTICE OF MEDICINE.

Treatment of Typhoid Fever in Paris.—An epidemic of Typhoid Fever is very prevalent in Paris at present, and it is seen in all the Hospitals. In these it is quite interesting to witness the variety of treatment adopted by each physician of note, as his medical tendencies incline; that pursued respectively by MM. Bouillaud, Briquet and Louis, whom I have followed, presents many points of difference, and it has been difficult to determine on which side the scale of success leans. We hope, however, to be able to send a paper by a medical friend who has watched closely the service of the former, and who can furnish some testimony with respect to his mode of employing the lancet in this disease. M. Louis very generally administers seltzer water, vinous lemonade, and adopts, to a certain extent, the expectant system. M. Briquet at La Charite pursues to me rather a middle course. He ab-

stracts blood in the early stage of some cases which seem peculiarly fitted for it. I may observe here that I also have heard M. Trousseau say, that even as late as during the second and third septenary period, he was in the habit of bleeding to prevent the increase, or destroy the congestion of the lungs which so often exhibits itself, its approach and presence being of course easily discoverable by the physical signs. M. Briquet relies with much confidence (and my own observation in his wards can sustain him) upon the application of cups and scarification to the mastoid region during delirium and coma of Typhoid. It completely checks the increase of these dangerous symptoms, as I have repeatedly witnessed. He does not give mercury internally, but applies plasters of mercurial ointment over the entire abdomen until the secretions become active, or the tongue and skin exhibits the desired moisture. This method of using the remedy might more easily reconcile itself to those who so much doubt respecting the advantages of its internal administration. He gives ordinary Bordeaux wine, during the period of convalescence. These means, thus generally expressed, are often associated in his practice with the use of ice, administered in every possible way, and through every channel—bladders filled with it are applied to the scalp, it is dissolved in the mouth and given with enemata. One of his Internes mentioned to me this morning, that he had lost but one case within three weeks. There are between twenty and fifty sick of the disease in each service of the Hospitals, and few of these fail to present gargouillement, the character rose mark and sudamina.—*Paris Correspondence Charleston Med. Journ.*, June, 1853.

Treatment of Rheumatism by Quinia and Veratria.—The treatment of acute Rheumatism by Quinine, commenced by M. Briquet, and to a certain extent discontinued, on account of the doubtful character of the termination of one or two cases in which large quantities were administered, has been very much revived of late, and the impression respecting it gains favor daily. I have seen M. B. give it with good effect quite often. M. Valleix employs and recommends it at La Pitié, and I hope to be able to send a paper on the subject by a gentleman who attends his *Services* and Lectures. One gramme (15 grains) is administered once or twice a day, and the patient kept partly quininized. The gravity of the usual symptoms daily decreases, and it seems not to be at all hostile to cardiac complications. M. Trousseau, in commenting upon this and expressing his favorable impression, alluded also to the expenses attending the use of this agent, accompanying it at the same time with the relation of a remarkable instance of recovery from acute articular Rheumatism, which was then in his wards. It was true, he added, that it was as yet an isolated case, but the repetition of the means used might give equally favorable results. It followed the employment of Veratrine after the method recommended by M. Daniel (?). The patient, a woman under middle age, suffered intense pain in the articulations, high fever with endocarditis exhibiting itself by a derangement of the first sound at the base of the heart—(sigmoid valves of aorta)—with a souffle prolonged into the large vessels, and accompanied with an

alteration in the left ventricle also. In sixty-two hours she was absolutely cured, leaving not the slightest trace of febrile excitement, the presence of a slight souffle alone remains. One half of a milligramme (about 1-10th of a grain?) was given in the form of pill, each day increasing the quantity, and, when the pains were relieved, continuing it in the same dose every second day. Its influence on the circulation in this case was prodigious, to use M. Trousseau's expression; the pulse fell to 42, and when I heard of the patient two days after, it was still at this reduced rate. Veratrine, we are aware, is one of the active principles of colchicum, and it is, therefore, not surprising that it should possess some power in acute Rheumatism, more particularly in those dependent upon the arthritic diathesis, gout, etc.—*Ibid.*

Case of Severe Chorea. By Dr. Barclay, Medical Registrar to St. George's Hospital.—A very severe case of this disease has just been brought to a successful termination, some few particulars of which may be found worthy a place in the *Medical Times and Gazette*. For some days the issue in life or in death was exceedingly doubtful; and the means employed, with beneficial results, being somewhat unusual in the treatment of this disease, available suggestions may be derived from their detail to guide others in the management of similar instances.

The two principal remedies used at the time when the disease took a favourable turn, and to which we are, therefore, disposed to look as those by which its progress was checked, were the inhalation of chloroform and the employment of large suppositories of quinine. The former agent now holds the first place in temporarily allaying nervous irritability and suspending muscular action; but its effects are also not merely temporary; sleep commonly follows on recovery from the immediate stupefaction; and in how many instances may not the physician say, "if he sleep he shall do well!" But it is not the troubled dream of narcotism or *quasi* intoxication that fulfils the function of "Nature's soft nurse." If natural sleep does not follow on the cessation of the artificial dose,—if the drug, whatever it may be, does not serve merely as the first provocative of a "balmy sleep," which is prolonged without artificial aid, the object of the physician will be frustrated, and the patient will awake unrefreshed by his slumbers, and, perhaps, not uninjured by the congestion of the brain which always attends in greater or less degree the action of narcotics. On this circumstance depends the very varying success which has attended the use of chloroform in states of extreme nervous irritability—mania, delirium tremens, and chorea; in each of which it has been employed at times with apparent advantage, while at others its effect has been null, or even, perhaps, pernicious. It is true that, as its effects are more transient, at the same time that they are more decided than those of any other narcotic, it may be ventured on in those doubtful cases bordering on inflammation, where, in all probability, a certain degree of congestion already exists, and where we should not feel justified in giving opium or even morphia experimentally, and, therefore, there is less limit to the cases in which its effects may be tried; yet while we know that we can for a time allay pain, annul consciousness,

and calm irritability, we cannot be certain that we shall succeed in obtaining a natural sleep, and, therefore, can be by no means certain, even when no congestion exists, that its action will be curative.

Along with the calm of the narcotic, and, in fact, to give full force to its action, it was necessary to support the system, and restore its exhausted energies, by the administration of a tonic. Large doses of quinine have of late been so frequently given, with alleged benefit in some instances, and apparently without prejudice in all, that nothing need be said except with reference to the mode of administration, which was here in the form of suppository: tonics and sedatives, taken into the stomach, had failed of quieting, and restoring disordered function; and, in such cases, it always demands consideration, whether perverted assimilation may not prevent their entering the circulation in such a manner as to produce their normal effects on the system. Dr. Wilson is constantly in the habit of noticing this circumstance in the depraved states of stomach of habitual drunkards, and attempting to reach the nervous system by another channel, which may not offer the same obstruction to its absorption. With this view, opium, in the form of suppository, is frequently ordered in delirium tremens with the best effects.

The consideration, too, of the absence of the menstrual flux, the evidence of periodical congestion of the generative organs, was not without its importance in determining this application of the remedy. The catamenia had been regular up to that time, and the decided exacerbations of the symptoms occurred just when their return was expected. Two or three days had passed without any appearance of the sort, and the symptoms were gradually increasing in severity when this remedy was employed. It may be remarked, however, that, up to the period of her convalescence, the function was not restored.

Susan H—, aged 16, was admitted into St. George's Hospital, under the care of Dr. Wilson, on February 23, 1853. She had been in service, and had been much worried by illness in the house, and over-work. No other cause was known for the occurrence of the symptoms of chorea, which had been gradually supervening during a fortnight or three weeks before her admission. She had had no rheumatism, and the heart was healthy. When received into the hospital, the spasmodic movements were not by any means violent, nor very constant; but there was great distortion of feature, especially when she attempted to speak. She was ordered a strong purgative, and then directed to have six minims of Fowler's solution in pimento water, three times a day. The bowels were rather loaded, and much inclined to be costive, and the purgative was repeated on two or three occasions. She continued taking the arsenical solution until the 11th of March, and seemed, under its influence, to be gradually becoming quieter and steadier. She was rather out of sorts that day, and the arsenic was left off for a day or two.

The spasmodic movements now began to be more frequent and severe, and she was obliged to lie in bed. The sesquioxide of iron was given in doses of two scruples three times a day without benefit. Her nights became disturbed, and she used to scream out a good deal during the day. Seclusion had rather a calming effect upon her; and the bed was

screened off from the rest of the ward, during which she used to have occasional short slumbers; but, for the most part, she was very restless; the expression of her face was rather wild, and the spasmodic movements constant and severe.

On the 17th, the bowels having been well purged, she was ordered to have a third of a grain of tartar emetic every three hours, and half a grain of acetate of morphia at night. This produced no sickness, and seemed partially to calm her; it was continued a second day, at intervals of four hours. She had no sleep that night, and was evidently no better; without being very violently tossed about, there was excessive restlessness and desire of movement; her face was much distorted, and the expression wild, and almost maniacal; and, as she sat upon her bed, with her legs drawn up under her, and her hair in wild confusion about her face, she looked much more like a proper inmate for Bedlam, than a person suffering simply from chorea, and the more so, because of her constant cries; but the nurse satisfied herself that she was free from delirium, and perfectly conscious on all occasions.

She had now passed the catamenial period, with no return of the menstrual flux. Her nights were sleepless, and a quarter of a grain of morphia was given every three hours to six times, but without benefit. She seemed to be gradually becoming exhausted by the constant jactitation and want of sleep. Wine had been given; yet the tongue was becoming dry and brown, the lips covered with sordes, and the pulse quick and feeble. Her aspect was distressed, and she was tossed about very violently by the spasmodic movements of the disorder.

On the 21st she was directed to inhale chloroform, and to have a suppository, with two grains of opium at once, and a draught with four grains of camphor, and some chloric ether every two hours. The first inhalation quieted her, but she awoke almost immediately after the first effects had passed off; it was not repeated till night, and, in the mean time, eight grains of quinine in suppository were ordered every hour for six times. She had some sleep after the second inhalation, and it was repeated the following forenoon. She was decidedly quieter, and the draughts and the suppositories, which had not been all given with perfect exactness, although very frequently during the night, were continued at intervals of four hours. The chloroform inhalation was again repeated on the evening of the 22d. She slept pretty well after it through the night, and fell asleep naturally next morning, waking up to have her dinner, and almost immediately going to sleep again, and continuing to dose all day. From this time she continued to improve rapidly. She was still a little odd-looking in the face, and restless jactitations lasted for some time; but she gradually became steadier. On the 4th April she was ordered Griffith's mixture, and on the 15th was discharged recovered.—*London Medical Times and Gazette.*

External application of Ice in Typhus. By Dr. SANDRAS.—The practice consists in the following proceeding:—The abdomen alone is covered with ice, when tympanitis, heat of skin, pain in the abdomen on pressure, and attacks of colic, constitute the chief symptoms. Ice

is mixed with linseed-meal, which absorbs the water, and is renewed at frequent intervals in the beginning, when the thawing goes on too quickly from the heat of skin; the application is repeated every quarter of an hour, or even oftener, but less frequently as the heat and fever diminish. First the tympanitis vanishes; then the pain and fever. In hæmorrhages, during typhus, there is no better remedy than ice. Should congestion of the head and stupor supervene, then ice must be applied in a caoutchouc bag to the scalp.—*Med. Times and Gaz.* from *Gaz. des Hop.*, 13, 1853.

Complete Closure of the Pulmonary Artery.—Cyanosis.—Dr. Hare presented a specimen of this malformation, taken from a child who died at the age of nine months. During life, the limbs were colder than natural and of a dusky hue. Whenever the child coughed, or was moved much, he became distinctly blue. There was nothing unusual in the conformation of the chest, but close to the left nipple a purring tremor was detected, and at the apex of the heart a moderately loud systolic blowing murmur was audible. A *post-mortem* examination was made twenty-seven hours after death. There were about two drachms of fluid in the pericardium. The right auricle was much dilated and filled with blood. The foramen ovale was patulous, but extremely small. On cutting into the right ventricle, it was found that the carneæ columnæ were fused almost into one mass, so that this part of the right side of the heart was nearly solid. Towards the base of the ventricle, rudiments of the tricuspid valves were discernible, hanging into a cavity no larger than a moderate-sized pea. The pulmonary artery measured rather more than an inch in circumference at its middle, but the ventricular extremity terminated in a cul de sac, where there were some minute folds, probably rudiments of the pulmonary valves. At its upper extremity the vessel communicated with the aorta in the ductus arteriosus, the orifice of which was capable of admitting a crow-quill. The right and left pulmonary arteries were given off from the main trunk as usual. The left auricle was somewhat contracted, but the remaining structures of the heart were in their normal state. Dr. Hare remarked, that although instances of complete closure of the pulmonary artery were not rare, yet he thought the present specimen was almost unique, as exhibiting so contracted a foramen ovale in conjunction with that malformation.—*Lond. Med. Times and Gazette.*

On the Application of Gutta Percha in the Treatment of Diseases of the Skin. By Robert I. Graves, M. D., F. R. S.—Dr. Graves directs the attention of practitioners, in the treatment of certain forms of cutaneous disorder, to the necessity of protecting the abraded and tender surface of the skin, the *cutis vera*, from the contact and action of the air and other hurtful agents. The effect of blood coagulating over a cut or abraded surface is known to be beneficial, and not less serviceable are those secretions which are furnished by surfaces abraded and in a state of inflammation. The premature and forcible removal of all these discharges, which are to be regarded as natural coverings, is

always injurious, and tends to continue inflammation and irritation, and consequently to defer healing and protract the disease.

Dr. Graves thinks that artificial substitutes for these secreted coverings, or artificial coverings over them, may be useful in effecting the healing of extensively abraded surfaces in cutaneous disorders. Of this nature are solutions of collodion, which have been in occasional use for some time; and more recently solutions of gutta percha in chloroform have been employed with similar beneficial results.

It is well known that there are certain obstinate forms of cutaneous disorder, in which, whether from the nature of the disorder, or the extent of skin abraded, denuded, and irritated, it is often difficult to effect either cure or alleviation. Such are some forms of psoriasis, eczema, impetigo, and leprosy. In treating affections of this kind, a covering of gutta percha seemed to Dr. Graves well calculated to protect the tender surface, and thereby to promote the healing process. After various trials with this agent, the results have been such, that Dr. Graves conceives that they ought to be well known. The therapeutic application of gutta percha is mentioned by Dr. Neligan in his recent work. But it may be useful here to give some notice of the method from the account by Dr. Graves himself.

When the saturated solution of gutta percha in chloroform is spread by means of a camel's hair pencil over a portion of the skin, the solvent fluid rapidly evaporates, leaving a delicate and extremely thin pellicle of gutta percha firmly adhering to the part. The peculiar toughness of gutta percha prevents this pellicle from being brittle, and therefore it is much less liable than collodion to crack and fall off in small scales. On the forehead or face, where it is not affected by friction of the clothes, it remains firmly attached for five or six days, or even longer; but on other portions of the surface it is often rubbed off much sooner. Over dry eruptions of the skin it lasts longer than over those which are moist, and over smooth and firm spots, of course, longer than over those covered with rough morbid scales or loosely adhering crusts. Before the application of this solution, therefore, the practitioner will do well to render the portions of the cutaneous disease to which he intends to apply it, as free as possible from crusts or scales, by means of poultices, alkaline lotions, &c. When the precaution is taken, he will find that the artificial cuticle which he has applied with his brush will in certain cases act most sensibly on the subjacent disease, diminishing inflammation and its consequences, and powerfully contributing to the restoration of the healthy structure of the skin.

Whether it acts by the equable pressure which the film of gutta percha, suddenly coagulated from the fluid state, must exert on the surface to which it becomes so firmly adherent, or whether its efficacy be rather owing to other causes, it is beside the object of Dr. Graves in writing this notice to discuss. He remarks, however, that the curative properties of such an artificial covering are not confined to the skin; for, in the "Gazette Medicale de Paris" (April 10, 1852), is an account of the successful application, by M. Dechange, of collodion in orbitis; and the *modus operandi* is said by him to consist in its compressing the

tissues, and protecting the parts from the action of the air, which he thinks is a powerful element of phlegmasia. Without giving an unqualified assent to this explanation, Dr. Graves has no hesitation in announcing his firm conviction, that, in diseases of the skin, this solution furnishes us with a new and active remedy, exerting effects quite different from those produced by any topical application hitherto in use.

The transparency of this artificial membrane enables the surgeon to watch the progress of the subjacent diseased skin, and its colorless nature prevents it from disfiguring the face when the eruption occupies that part. Its perfect cleanliness, too, is no small advantage, and affords a very agreeable contrast when compared with the usual ointments, &c.

The observations of Dr. Graves confirm what reasoning on this subject would lead us to expect, that this application is more suited for dry, scaly, tubercular, and chronic diseases of the skin than for acute affections attended with much oozing of fluid and comparatively active inflammation.

Still, its good effects are by no means limited to chronic diseases of the skin, or those of a scaly, dry nature; for, as will hereafter appear, Dr. Graves has seen it decidedly useful in the spreading form of impetigo. His experience of this remedy makes him anxious to witness its application in the first stages of erysipelas, as analogy leads him to hope for good results in such cases.

Of course the patient must aid the efforts of the physician, and must, as far as possible, abstain from every thing which tends to rub off or injure the artificial cuticle; for its virtue ceases when its continuity is broken and the external air finds admission to any part of the diseased surface.

Early in the month of November, 1851, Dr. Graves was called to visit Mrs. C., from ———. She was about fifty years old, full and plethoric; the mother of a large family, and, until the disease of which she then complained, commenced, generally healthy. About two years before, she observed small spots of impetigo on her limbs and body, which succeeded each other, some healing while fresh ones appeared. During summer she was nearly free from them, but last autumn they returned with greater virulence than ever, and have since increased both in size and numbers, some being larger than the hand, and attended with constant oozing of fluid, which imperfectly coagulates, forming loose and thin crusts. The itching at night was intolerable, and nearly deprived her altogether of sleep. Dr. Graves employed the usual general and topical treatment for a fortnight without alleviation of her sufferings, when he thought of trying the saturated solution of gutta percha in chloroform, and had it carefully applied by Mr. Nicholls of Dawson Street, at first by way of trial, to one of the smaller spots, and on the following days to each of the larger patches of eruption in succession. The relief obtained was such that it appeared almost incredible, both to the patient and her family. Her cure was accomplished in less than three weeks; for, dreading the sudden stopping of so great a discharge and so much cutaneous irritation, he proceeded cautiously, and towards

the end of the cure, when she returned home, he directed an issue to be inserted in her arm, as a measure of precaution. She has continued well up to the present time (11th April, 1852).

In this patient the attendants were at first obliged to re-apply the gutta percha every second day, as it was rapidly detached and broken up into large flakes by the discharge from the subjacent surface. Its healing influence, however, speedily diminished the diseased secretion, and then, the artificial cuticle remained longer adherent, and it was not necessary so often to use the scissors for the purpose of cutting off the loose portions of gutta percha membrane previously to applying a fresh layer. The camel's hair brush should be plunged, the moment it has been used, into hot water, to prevent it from being consolidated by the coagulated gutta percha.

This case caused a great sensation among the patient's friends and relatives, and many were the inquiries made relative to the method of cure employed. Dr. Graves confesses that his own astonishment at the result was not less than theirs.

Since that time Dr. Graves has repeatedly used this application in *acne of the face*, in which disease each of the pimples should be covered with the solution, and the patient enjoined not to rub off the pellicle by washing, &c.

In some this treatment alone causes a material and rapid diminution of this tormenting eruption, and by perseverance in this plan, there is every appearance in two of his patients that the tendency to throw out the pimples is gradually ceasing.

Finally, in several cases of psoriasis Dr. Graves applied this solution with great benefit. In this disease much care must be taken to prevent the application being rubbed off by the clothes, and no woolen stockings or rough garment of any sort should be allowed next the skin. I had the satisfaction of curing in a fortnight a chronic psoriasis of the back of the hands and arms in a lady who had been under homœopathic treatment for six months without deriving the least advantage from the infinitesimal doses prescribed by the practitioner.

Since the preceding observations were written, Dr. Graves received the following note from Mr. Moore. The additional information concerning the effects produced by the application of collodion strongly verifies the observations respecting the local antiphlogistic action of a gutta percha pellicle:

"M. La Tour has for some time advocated the doctrine that external inflammation may be speedily subdued by withdrawing the affected surface from the influence of the air. This he effects simply by a layer of collodion, which, he says, rapidly assuages the inflammation of gout and articular rheumatism. At the meeting of the Academy of Medicine, on the 8th of February, M. La Tour related a case of peritonitis in which the symptoms were dissipated within twenty-four hours, by the application of a layer of collodion to the whole surface of the abdomen."

POSTSCRIPT, *June* 7, 1852.

My anticipation respecting the utility of an artificial cuticle applied over the parts affected by commencing erysipelas, has, I find, been veri-

fied, as appears from the following paragraph taken from Dr. Neligan's able Treatise on Diseases of the skin:

"Acting as an impermeable varnish, and probably producing some effect, also, by the compression it causes, collodion has been successfully employed by Spengler and Rapp, as a local application in erysipelas. The parts are thickly coated with it by means of a camel's hair pencil and it is renewed as often as may be required in consequence of its cracking and peeling off when dry."

When Dr. Stokes heard of the success of Dr. Graves in other cases, he resolved to try the gutta percha solution in small-pox, and the result of two trials is most encouraging, and leads to the hope that at length a means of preventing the formation of disfiguring scars on the face in that disease has been discovered. Dr. Stokes has allowed Dr. Graves to publish the two following cases treated by him at the Meath Hospital, and noted by this clinical clerk, Mr. Robert P. White.

Anne Kenny, aged eighteen, was admitted into the Meath Hospital, 11th May, 1852. She was never vaccinated; her illness began on the 6th of May by rigors, headache, and pain in her loins, but without any vomiting. On the 8th, the eruption appeared, and on coming into hospital, the eruption was well formed and confluent on her face; the fever of a typhoid character, with considerable prostration of strength; she was much annoyed with pain and itching of her face. She was ordered wine and carbonate of ammonia mixture, and her face to be painted with a solution of gutta percha in chloroform.

The solution was applied with a soft brush; the entire face being well coated with it, and after an interval of a few minutes (just sufficient to allow the previous coating to dry), a second coat of the solution was applied.

This application, she said, gave her great relief, and allayed the pain and itching. On the 13th she was much better, and the solution was again applied in the same manner.

22d May. She has proceeded most favorably; all the crusts have come off the face in large pieces, and there is hardly any trace of the disease remaining except a slight discoloration. During the whole time of her illness, from the application of the solution, her face continued moist, and there was no ulceration in any place.

Catherine Sherlock, aged twelve, was admitted 13th May (seventh day of eruption). Her illness commenced by headache, pain in her loins, and rigors, but without sickness of the stomach; she was never vaccinated. On admission she had a good deal of fever of a typhoid type; the eruption had come out well, was confluent, and had completely covered her face; she complained very much of pain and itching of her face and head, which kept her from sleeping. The solution of gutta percha was applied as in the former case, and apparently gave her much relief, for she was easier afterwards, and ceased rubbing and tearing her face in the manner in which she had been doing before. Wine was also freely used as in Kenny's case.

22d May. All trace of the disease has nearly gone, the crusts coming off in large pieces, and the remaining marks of the disease being very trifling when compared with the violence of the attack.

The same effect of the solution in keeping the face moist was also observed in this case as in the preceding.

In communicating these cases, Dr. Stokes observed, as worthy of notice, and probably connected with the beneficial result produced, that the most remarkable effect of the gutta percha was to keep the face constantly moist, and to prevent the formation of hard and irritating crusts. He also mentioned a singular illustration of the effects of total exclusion of air from the cutaneous surface as a preventive of the eruption in small-pox. It was that of a man who, while in the Meath Hospital for a scrofulous enlargement of the knee-joint, was attacked with this disease; the knee had been previously tightly strapped with adhesive plaster, and on the disappearance of the eruption, it was seen, on removing the strapping, that not a single pustule had been developed on the parts which were thus covered.

It is scarcely necessary to add, that however useful solution of gutta percha in chloroform, or any other topical applications, may prove, it would be, nevertheless, absurd to expect from them a radical cure of those chronic cutaneous affections which arise from constitutional causes, whether strumous, syphilitic, or cancroid. As well might we look for the cure of scarlet fever, smallpox, or measles, by means of remedies applied to the skin solely with the view of relieving the eruption. Still, in every chronic disease, it is manifestly desirable to diminish, by topical means, the annoyance or disfigurement arising from the cutaneous affection. This relief cannot but be serviceable if it did nothing else than afford time for the due and gradual employment of a well-directed constitutional treatment. Dr. Graves saw this lately well exemplified in the case of a young lady who had been under the care of an eminent London surgeon for many months, and from whose medicines she had derived no relief. She was the subject of a most disfiguring eruption, agreeing in character with the *lupus supiginosus* of late writers; it occupied sparsely the nostrils and cheeks, but on the forehead it formed an extensive group of sores. Some spots it left hypertrophied after healing, but in general its course was marked by white depressed seams. It had been the seat of constant irritation, which the patient could not avoid increasing by scratching during sleep, and consequently the surface of the face usually exhibited a number of bloody points, adding to its disagreeable appearance. The entire eruption healed after a six weeks' application of the gutta percha, and she is now (what she had not been for two years) free from any cutaneous irritation. Time alone can determine whether relief will be permanent; but there can be no doubt of the great value of the advantage already gained.

Dr. Graves observes that, in psoriasis and other chronic cutaneous complaints unattended with any constitutional derangement, it is of the greatest consequence to check the growth of each new spot. This the gutta percha does most effectually in psoriasis, and when applied daily to any recent points of irritation, it smothers, as it were, each nascent centre of future blotches.—*Dub. Quart. Journ.*

Debate on Tracheotomy in Epilepsy at the Medical Society of London.—Dr. Radcliffe read a paper "*On the Questionable Utility of Tracheotomy in the Treatment of any kind of Epilepsy.*"—In order to arrive at the object of his paper, the author depended chiefly upon a critical examination of the cases of epilepsy in which tracheotomy has been practised, and to this examination he at once proceeded:

Mr. Cane's Case.—The patient was a boatman, aged twenty-four, who had been epileptic for seven or eight years. The fits were severe and frequent. The operation was performed during a fit, in consequence of a state of asphyxial-coma that had lasted nineteen hours. The relief was immediate, and no fits have followed the operation. The habits of the patient were very irregular and intemperate, and he was discharged from his employment on this account about ten months ago. The tube is still worn, and curiously enough, it is worn with a cork in the opening.

Mr. Anderson's Case.—The patient in this case was a stout, thick-set, muscular female, aged thirty-six, the daughter of an epileptic father, and herself epileptic for twenty-four years. Her complexion was ruined by the former use of nitrate of silver. The operation was performed in March, 1851, and the tube was worn until her death, which happened in a fit about four months ago. After the operation the fits continued as before—possibly a little less frequently and severely, but decidedly of the same character. Her health and spirits also are said to have undergone some slight improvement, and she lost a numbness in the right arm which had previously distressed her, but those who knew her best doubt the existence of any appreciable change of this kind until about two or three months before her death—sixteen months after the operation. The following notes of the final seizure are from Mr. Anderson:

"Eight A. M.: Had been up and dressed; heard to fall heavily. A woman removed the inner tube from the trachea as she was in a fit apparently more severe than usual. She 'snorted loudly;' nails of a deeper color. She was placed on the bed, as the woman thought she would recover as usual." The woman here referred to says the patient was black in the face and violently convulsed, and that death must have taken place within ten minutes. The body was examined twenty-four hours after death, and the following are the particulars supplied by Mr. Anderson:—"Body extremely muscular; cadaverous rigidity still present; not much fat. Head: Vessels of scalp much congested; skull thick, and dura mater so universally adherent that the skull-cap could not be removed until the dura mater was divided. The sinuses were filled with dark blood, and on the removal of the brain an unusual quantity of dark blood flowed from the spinal canal. On either side of the longitudinal sinus, and on the inner side of the frontal bone, two or three growths of bone were found, and to these the dura mater was so firmly adherent that, on attempting to separate it, it was torn through, and portions remained attached. The largest of the exostoses was about an inch and a half in circumference, and projected about half an inch from the surface of the bone. No alteration was observed in the corresponding portion of the cerebrum. The brain was softer than natural, and the puncta were more than usually distinct. There was little fluid

in the ventricles, but the choroid plexuses were congested. Lungs: These organs were collapsed, occupying but little more than a third of the thoracic cavity, and somewhat congested at their posterior margin; structure healthy. Heart: Larger than usual (perhaps a fourth;) cavities, especially the left, distended with blood. It was surrounded with fat, and its structure flabby;* valves healthy. Liver, kidneys, and spleen: Highly congested. Uterus natural, but cysts containing viscid fluid in the ovaries. Small intestines (especially lower part of the ilium) congested, and the mesenteric glands enlarged. Internal jugular, above the level of the omohyoid, almost empty."

Mr. Mackarsie's Case.—R. W——, aged forty, and epileptic for twenty years. Latterly the fits had become much more frequent and severe, the subsequent torpor much prolonged, and the mind much impaired. His complexion had a congested, mahogany-like tint. Two years previously he had had two attacks of paralysis, but his present health, apart from the fits, is pretty good. Tracheotomy was performed on the 24th of August, 1852, by means of the tracheotome. On the day following the operation inflammatory action began in the lungs, and continued until the 6th of August. Thus,—August 25th: "A large quantity of mucus has passed from the tube." 26th: "The patient has been hot and feverish, and passed a restless night; tongue furred; pulse 100; a large quantity of mucus passing through the tube." 27th: "Pulse 100, full and hard." 28th: "Tongue still furred." 31st: "Violent hæmoptysis." Sept. 1st: "Violent return of hæmoptysis;" "left lung congested, dull on percussion, and respiratory murmur feeble." 2d: "Expectorates bloody mucus;" "dulness on percussion not so marked; respiratory murmur more audible." 3d: "Still bloody expectoration." 4th: "Pulse 90 and soft." 6th: "Pulse 75, soft; respiration free; dulness on percussion gone." Again, on the 20th September, and for some days afterwards, there was feverishness, attended with bilious vomiting, requiring salines, calomel, and prussic acid. The fits, however, kept away until the second week in October, when four or five slight ones happened. After this true fits made their appearance, and continued to recur with their usual frequency, though in a mitigated form, until about two months ago, when the tube was withdrawn by the patient's wife, (who throughout has been greatly opposed to, and dissatisfied with the operation,) since which time the fits are as bad as ever, and the mental condition worse than ever. Mr. Mackarsie is fully of opinion that during the time the tube was in the trachea the mind was more active, the complexion less congested, and the fits less severe.

Mr. J. A. Lockhart Clarke's Case.—In this case the patient was a female, twenty-three years of age, who had been epileptic for twelve years. The fits were very violent and very frequent. Laryngotomy, not tracheotomy, was performed about three months ago, and the tube worn until recently, when it was removed, in consequence of their being no perceptible alteration either in the frequency, or in the severity of the fits.

* Dr. Jenner examined a portion of this heart microscopically and found some slight degree of fatty degeneration.

Mr. Henry Thompson's Case.—The main facts of this case are substantially these: The patient was an epileptic of twenty years standing, whose intellect had suffered considerably. Tracheotomy was performed nearly three months ago. Before the operation the fits were frequent and violent, and the subsequent sopor prolonged; since the operation the fits have altered little in frequency and violence, but the subsequent torpor is greatly abridged. The general health also is improved, and the mind much clearer than it was.

Dr. Tyler Smith's Case.—Sarah B——, the wife of a gamekeeper at Debden in Essex, and the mother of four children. She has been epileptic since puberty, and chiefly about the menstrual period. The numbers of the fits during the month were sometimes as many as twenty, but generally not more than five or six. The fits themselves were usually preceded by the scream and attended with much lividity of the head and neck; the convulsions were very violent and the subsequent sopor protracted. The mental state was one of great inanity. There had been several paroxysms of insanity, and twice the patient had been in a lunatic asylum. During the month that she remained in the hospital before the operation there were nine fits; during the month after the operation there were five fits. The operation itself was performed on the 13th of February by Mr. Lane. On the 15th, 16th and 17th she was restless, wakeful and unruly, with heat of skin, raised pulse, and furred tongue. She threw a glass at the nurse, and persisted in attempting to withdraw the tube from the neck, and her state required constant watching. Three weeks after this she was greatly depressed, her pulse feeble and wretched, her countenance anxious, and much viscid, fœtid phlegm passed from the tube; and this state continued for the greater part of a week. Since this time she has rallied, and now her mental condition is much better than it was during the month before the operation; her fits also are much better, the period of sopor is somewhat abbreviated, and the cry is lost; but still the convulsion is violent, the venous turgescence of the head and neck considerable, though less than it was, and once at least the tongue has been bitten.

Dr. Andrea Verga's Case.—This case cannot strictly be classed with the former cases, for the operation was performed unintentionally, and by the patient himself; but in all other respects it fulfils the required predicaments. It was originally reported in one of the Lombard journals, and copied thence into an early number of Schmidt's *Jahrbuch* for 1852. The main particulars are the following: A. B.——, aged twenty-five, was admitted into the great hospital at Milan, with his throat cut and his genitals severely mutilated, in consequence of a determined attempt at suicide. Six months afterwards the wounds had healed, with the exception of a free fistulous opening in the trachea; but the fits and despondency had undergone no change. The breath passed freely in and out of the artificial opening, and the fits recurred with equal frequency and force whether that opening were closed or not. In this state he was removed to a madhouse, and there he remained for three years, when he died of tabes, the fistula continuing open and the fits unabated up to

the end. After death the brain and skin were found congested and the bowels somewhat ulcerated.

Comments.—Such are the chemical data upon which as yet the remedial value of tracheotomy in epilepsy has to be tested, and the question is whether or not they realize Dr. Hall's expectations, and justify the comments which have been passed upon them.

What of Mr. Crane's case? Here undoubtedly the results seem most marked, but do they not prove too much? There are no fits whatever after the operation, and this is not to be expected even on Dr. Hall's own premises. Moreover, fits do happen in all the other cases, and in some of them very severe fits, and this fact gives a probabilty of at least seven to one that the fits in this case did not keep away in consequence of the operation. It is to be remembered also, that the wearing of the cork in the tracheal tube did in fact place the patient in the same predicament as that in which he was before the windpipe was opened. Why the fits kept away it is not necessary to inquire, for nothing is more certain than that epilipsy may suddenly disappear and keep away for a long time, without any apparent cause.

What of Mr. Anderson's case? Here the main questions are as to the character of the fits, the state of the general health, and the cause of death. Were the fits improved in character? Possibly, but not probably. Dr. M. Hall, in his lectures at the College of Physicians, allowed that a fit had followed very shortly after the operation, in which the tongue had been bitten. A Mrs. Dwellie, living in the adjoining garret to the patient's, and who frequently went to the patient's assistance when she heard the noise and struggle of the fit, states explicitly that the convulsions were as frequent and violent, and the subsequent sopor as prolonged, after the operation as before it. A Mrs. Smith, also, an aunt of the patient, who had known her from childhood, and who saw her several times a week during the whole of her life, makes the same statement. Miss Lewis, on the contrary, who lives on the first floor of the house in the garret of which the patient lived, thinks the fits, after the operation, were not so severe or frequent as before it; but why she thinks so is not very evident. She saw her in but few fits, and in none (there is reason to believe) from the commencement. Indeed it is to be understood that this witness was infirm and half-crippled, and often quite an invalid; that she had to be fetched from the top of the house, and then to mount up two flights of stairs before she could get to the place where the patient was; so that the fit must have been far from its commencement before she could see it. The last fit, also, which was evidently of great violence, is spoken of only as "apparently more severe than usual," showing that the ordinary fits were severe, and the patient was "expected to recover as usual," showing that death had occurred unexpectedly in what was regarded as an ordinary fit. Concerning the state of the general health there are two opinions. Miss Lewis says this was better; Mrs. Dwellie and Mrs. Smith say there was no perceptible improvement until within two or three months from her death, fifteen or sixteen months after the operation. The cause of death is very obscure. It could not be, however, from the strangulation

of laryngismus, for the inner tube was removed at the beginning of the last fit, as it was in all the fits in which the patient was watched. Indeed there was never any neglect or mismanagement about the tube, (which reflects the highest credit on Mr. Anderson's mechanical ingenuity,) and the patient herself had so schooled herself to it that she could remove and cleanse it, and did so remove and cleanse it many times a day. The fatty state of the heart, as Dr. Hall supposes, might have had something to do with death, for death happened shortly after the commencement of the seizure; but, on the other hand, it is not to be forgotten that there was stertorous breathing, blackness and turgescence of the head and neck, with distended sinuses, distinct cerebral puncta, and other signs showing that death might have been caused by coma.

What of Mr. Mackarsie's case? Here it is not difficult to imagine that the pulmonary inflammation and the subsequent febrile action may have had something to do with the absence of the fits during the first two months after the operation, for inflammation and fever are not only uncongenial to, but incompatible with, epilepsy. This inflammation also, even after its cessation, may have had something to do with the amelioration of the fits, by acting derivatively in regard to that mischief in the brain, the existence of which is to be argued from the two former attacks of paralysis. The fact, however, is not to be doubted—that the fits were "mitigated" and the mental state ameliorated after the operation. This is undeniable. Still the fits were true fits, and not mere warnings, and there is little if any reason for supposing that they gave up the characters of epilepsia gravior for those of epilepsia mitior; nor is it clear that the mind was not invigorated by hope or some other psychical stimulus, and that the fits were not subdued by the mind thus invigorated, the tracheal tube all the while acting merely as a charm by which to propitiate hope and her allies; nor is it clear that any diminished sopor after the fit may not have been the consequence rather than the cause of the mental invigoration. Time must elapse before these doubts can be resolved, and in the meantime it must not be forgotten that the wife of the patient was opposed to and dissatisfied with the operation.

What of Mr. Clarke's case? Nothing favourable to the operation.

What of Mr. Henry Thompson's case? In this case the fits recur as frequently as before, but the subsequent sopor and intermediate stupor are greatly diminished. Still it is by no means certain or even probable that the fits after the operation were of the character of epilepsia mitior, or that the diminished sopor and stupor were not the consequences of faith in the operation rather than of the operation itself.

What of Dr. Tyler Smith's case? In this case it is more than improbable that the fits underwent that modification which they ought to have done, or that any improvement in the symptoms is really due to the operation. All the fits after the operation were certainly not of the type of epilepsia mitior, for the convulsions were severe, and once at least the tongue was bitten. It is doubtful also whether the fits were really less frequent. During the first month of hospital life there were, it is true, nine fits, but this was a time when the patient was exposed to the agitating publicity of a hospital ward, with the fear of an operation before her

eyes. The usual number of fits during the month would also seem to be from five to six, though occasionally ranging so high as twenty, and these numbers correspond with the numbers after the operation. It is clear also that as yet little can be said about mental improvement after the operation, seeing that a paroxysm of insanity and a week of extreme mental inanity form a part of this period. This being the case, it is not necessary to speculate whether such improvement is psychically or somatically the result of the operation.

What of Dr. Andrea Verga's case? Possibly very little, but certainly nothing in favour of the operation.

On looking over these cases, therefore, one conclusion is inevitable—namely, that severe fits have followed the operation—fits in which the tongue has been bitten, and one fit in which death has happened. Almost uniformly the convulsion has been as bad as ever. In Mr. Anderson's, Mr. Clarke's, Mr. Mackarsie's, and possibly in Dr. Andrea Verga's cases, the sopor after the fit, and the torpor between the fits were unaffected; in Mr. Henry Thompson's, and possibly in Dr. Tyler Smith's cases, they were relieved, though *how* they were relieved remains a matter of doubt. As judged, therefore, by the results of the cases in which it has been practically tested, the utility of tracheotomy in epilepsy would seem to be extremely doubtful; so doubtful, indeed, as to render it a matter of paramount and imperative necessity to pause and ponder well upon the evidence before again resorting to it, and this all the more because it is by no means certain that the remedy is not more dangerous than the disease, and because the inevitable result of the operation is to convert the patient into a dumb, whistling wretch, whose every breath is an annoyance to himself and others. In order to do this it will be necessary to examine epileptics, whose windpipes are sound as well as those whose windpipes are not sound. It will be necessary to determine how much of the epileptic asphyxia depends upon spasmodic "setting" of the whole chest, and how far this "setting" will negative the results of an opening in the windpipe. It will be necessary to go to the root of the matter, and determine whether, apart from organic disease, the larynx does close spasmodically in epilepsy, and whether such closure can exist at the time of life when epilepsy happens. In the meantime the absence of any stridulous inspiration in epilepsy, such as is heard in laryngismus stridulus, in the hooping-cough of children, and in certain organic diseases of the larynx, would seem to be a serious, if not fatal objection to the idea of laryngismus in epilepsy. The age of epileptics—namely, youth and manhood—is also an objection to the same effect; for judging from the history of laryngismus stridulus and hooping cough, pure spasmodic closure of the larynx is usually confined to the period antecedent to that at which epilepsy commences; indeed, as a rule, laryngismus stridulus is an affection of teething, and hooping-cough looses its characteristic hoop before puberty. This deduction is also borne out by the results which follow the division of the laryngeal nerves in the lower animals, as dogs and cats; for in these experiments the young animal is immediately suffocated by the closure of the glotti-

dean chink, whereas the old animal goes on breathing without any evident diminution in the current of air.

Dr. Crisp regretted the absence of Dr. Marshall Hall, and was disposed to regard with favour the operation proposed by that gentleman. He deemed the whole subject worthy of further inquiry. Many epileptic patients are anæmic, but others are plethoric.

Dr. Barnes believed the subject to be very important, and the discussion of it not premature. He gave credit to the author of the paper for having recited the cases with fairness and candour, but inferred that Dr. Radcliffe had misapprehended Dr. Hall's views on the subject. He affirmed that each of the cases recited had exhibited marked improvement after the operation. Mr. Cane's case had been very successful; he admitted that. Mr. Anderson's patient had not died from asphyxia; but he did not admit Dr. Radcliffe's explanation. Dr. Jenner had found the heart in a state of fatty regeneration—a physical condition likely to cause death. Laryngismus is not met with in every case of epilepsy, neither is its presence essential.

Dr. Winn stated that epilepsy is not essentially accompanied by an anæmic condition of system.

Dr. Tyler Smith, in reference to his own case, explained that the attack of mania after the operation was probably to be attributed to the influence of chloroform. The fits are slighter, and the condition of the mind is clearly improved. He believed laryngismus to be essential to the disease, and that it occurs in adults without the stridulous breathing, except that the peculiar cry is a modification of that symptom. Lividity of countenance may be induced by spasms of the muscles of the neck, without the occurrence of laryngismus or closure of the glottis. Tracheotomy is not a serious operation.

Mr. Dendy thought that Dr. Hall had not been hardly treated, and that the cases had been fairly recited by Dr. Radcliffe. Tracheotomy is proposed, not as a remedy for epilepsy, but to relieve one of its symptoms. It is not a dangerous operation; yet he doubted if medical men would themselves submit to it. Laryngismus is neither the essence nor the proximate cause of the disease, and when it occurs it may pass away without the exhibition of any remedy. It is not important to decide whether this disease be essentially anæmic or not, but the case must be treated according to the nature of the patient's constitution. Congestion is not always productive of asphyxia, and may be relieved in some cases without the operation, or indeed without any remedy whatever. He believed that the good effects of the operation had been exaggerated.

Mr. H. Thompson, on referring to his own case, believed that the nature of the fit had been well made out, and stated that the family were unanimous in asserting that much benefit had followed the operation. The mind is clearly improved. He had witnessed the occurrence of a fit that morning, and found that loss of consciousness continued but during three or four minutes, instead of four hours, as had usually been the case previous to the operation. On that occasion the tube was not in a clean condition, and the same fact had been noticed on the occurrence of all the fits subsequent to the operation. He had removed the tube, and observed that respiration appeared to be suspended for a few

seconds, no sound indicating the passage of air through the trachea. Mr. Bullock described the present improved condition of Dr. Tyler Smith's patient.

Dr. Camps approved the operation under the circumstances selected by Dr. Marshall Hall. He considered that an attack of epilepsy is not antagonized by existing inflammation or fever.

Mr. C. Clark mentioned a case which he had relieved by artificial respiration.

Dr. Radcliffe, in reply, said that he had taken up the question under consideration, not because it clashed with any of his own opinions respecting convulsive diseases,—which it did not,—but simply as a matter of fact that from its importance ought not to be passed over any longer. He had frankly expressed his present convictions, but he was perfectly willing and ready to change them whenever they were shown to be wrong. He had, he trusted, acted with all honor and sincerity, and his only regret was that Dr. Marshall Hall, (whom he and all the profession highly honored) had not been present in person to hear and reply to what he had ventured to say. In reply to an observation that had been made in the discussion, he would only say that he could not understand how the epileptic cry would be a proof of laryngismus.—*London Lancet*, May 14th, 1853.

SURGERY.

Tracheotomy in a Case of Croup Successful. By WILLIAM CRAIG, Esq.—The subject of the following case was Master William A., aged 7. He is of a delicate and somewhat irritable constitution, and has had enlarged tonsils since he was three years of age. The enlargement of the tonsils has not been uniform, but liable to variations in size, from occasional exposures to cold. The frequent application of a weak solution of nit. argent. had only a partially beneficial effect, as the tonsils always continued less or more swollen.

To invigorate his constitution, and improve the affection of the throat, he was brought from Glasgow to the coast, to obtain the benefit of the sea air. I saw the little patient for the first time on the 23d of March. I then found the tonsils more than usually red, and pretty much swollen, and, on the most projecting part, they were partially ulcerated. I touched the ulcerated portion of the tonsils lightly with nit. argent., and recommended counter-irritation around the neck.

On entering his room on the following day, the first sound that met my ear was the well-known ringing cough of croup. My little patient was immediately subjected to the most rigid antiphlogistic treatment. Emetics and purgatives were freely administered, warm salt placed round the throat, and leeches applied during the first day of these croupy symptoms. On the second day, no improvements being apparent, the emetics were given in more decided doses; but their effects were more depressing than emetic. Besides antimony, ipecacuanha and sulphate of zinc were perseveringly administered by anxious and trustworthy

attendants. Calomel was also given in repeated doses, accompanied by mercurial frictions, but without any specific or beneficial effect. A blister was also applied to the side of the neck. Notwithstanding all these measures, the disease progressed to the full developed stage. On the fourth day of the disease, the emetics and other measures were continued, without the slightest melioration of the symptoms, as every repeated paroxysm returned with aggravated violence, and threatened immediate suffocation. I had had a dread from the first that the case might come to this extremity, and had resolved—and had the concurrence of Dr. Paterson, from Glasgow, in the propriety of my resolution—to give my patient the benefit of tracheotomy as a *dernier resort.* Dr. Whiteside, of this town, was also of opinion that my patient should have the chance of the operation; and he assisted me in the performance of it. The boy was seated on the knee of an assistant. A free incision of fully two inches in length was then made, without losing a drachm of blood; and every drop was removed before opening the trachea. It was opened to the extent of an inch fully, and the incision was at the same time carried through the false membrane. Immediately on the opening being made, the membrane was seen vibrating in the trachea, and a violent expiratory effort caused a large portion of it to be forced out; and the patient was immediately and completely relieved. The larger portion of the membrane thus ejected was about two inches in length and, at its greatest breadth, was fully an inch and a quarter. There were two small fragments thrown out at the same time, which, when added to the largest piece, made it of a uniform length and width. It was fully a line in thickness, and, in tenacity, it somewhat resembled that of an orange skin.

For a number of hours after the operation, there was little cough and no expectoration; but there was a considerable discharge for some time after this, without any bronchial or other pulmonary irritation which could be discovered to account for it. The discharge might, in my opinion, be supplied for the most part by the solution of that portion of the membrane which lined the trachea between the glottis and the opening. On the third day after the operation, the tube was found more than usually obstructed; and, on removing it, a portion of thin, membranous matter was flapping in the wound. Part of this was forced out by the expiratory efforts; and another portion adhered so firmly, that some force was necessary to separate it from the attachment it had with the inner surface of the trachea above the wound. This was evidently that portion of the false membrane which filled the trachea between the glottis and the upper part of the wound. A portion of it had a distinct tubular form; but it was remarkably attenuated, having rapidly dissolved after the opening through the trachea had been effected. In the course of eight days after the operation, the natural air passage had become so clear, that the tube was removed, and the respiration was established in its natural course. There was a partial return of the croupy cough on the 22d of April; but it became speedily better, and he has since continued to progress most satisfactorily, and is now nearly well, and the wound in the neck is now cicatrised. There was some

suspicion that this attack was connected with scarlatina, as a younger sister of our little patient died at the same house from a severe attack of fever, accompanied by the species of sore throat peculiar to this affection. What, in addition, gave countenance to this apprehension, was the desquamation, to some extent, of the cuticle, from the anterior part of the chest; but this might have depended exclusively on an erysipelatous condition of the skin around the incision, and extending down the anterior part of the chest a few days after the operation. The age of the patient, and the uncomplicated condition of the complaint—there was no pulmonary affection—were very encouraging circumstances in this case. Another circumstance which, in my opinion, promoted a favorable result, was the free opening in the trachea, as a strong expiratory current was permitted, which forced out the whole of the false membrane which was situated below the incision. The false membrane reached about an inch below the lowest point of the incision, very near the bronchial bifurcation. Some authors mention, that there is no prospect of success if the membrane extend below the point chosen for incision.

I do not consider that the question of tracheotomy should be delayed till the leaden hue of the countenance and purpled color of the lips evince to what extent the vitiation of the circulating fluid has advanced. The hopelessness of the case can be easily prognosed before the affection has advanced so far; and if an earlier period were generally chosen, there would, in all probability, be less chance of the extension of the false membrane into the bronchial tubes. It would have been hopeless to have expected the expulsion of the false membrane through the glottis, when, even in the attenuated condition in which the last portion came away, it required considerable traction with forceps to separate, or, rather, tear it from its adhesion to the inner surface of the trachea. Though the membrane had been loose in the trachea, such a mass coming up through the glottis with diminished expiratory efforts to force it through would inevitably have produced suffocation. Although the lower edge of the membrane was unattached to the walls of the trachea, it was firmly connected with the upper part, as was evinced by the strong adhesion of the attenuated portion that came last away.

The greatest number of authors who write on this disease consider tracheotomy as a hopeless expedient to save patients laboring under this formidable malady. If one can be saved out of ten, or even a much smaller exceptional proportion, I see no good grounds to withhold from a little sufferer the only chance which he has of being snatched from the jaws of death.—*Med. Times and Gaz.*

The Coagulation of Blood in Arteries by Means of Solution of Perchloride of Iron—Aneurism of the Suborbital Artery Cured by this Means.—Our readers, no doubt, remember the interesting account communicated by M. Lallemand to the Academy of Sciences, of the experiments made by M. Pravas of Lyons. This question having been lately brought before the Surgical Society of Paris, connected with its successful application in man, we will briefly detail in what M. Pravas's method consists.

He makes use of perchloride of iron at the maximum of concentration, a few drops of which it is to be injected into the vessel in which it is desirous to obtain coagulation. This injection is to be made with a very fine trocar, of either gold or platinum, the diameter of which is scarcely greater than that of a needle; this is to be introduced very obliquely, through the parietes of the artery, with a wriggling motion. To this trocar is adjusted a small syringe, the piston of which works with a rack and pinion motion, so that the injection proceeds without impulse, drop by drop, and in such a way, the quantity of liquid injected can be accurately measured. Every turn of the pinion allows of the escape of two drops of the liquid. Whilst this injection is used, the circulation is momentarily arrested in the vessel by means of pressure above and below. A few drops suffice (three or four in a sheep, six or eight in the horse) to form a solid and resisting clot.

Up to this time, the experiments had been only made on animals, but M. Lallemand expressed a hope to see them succeed in man. This appeal has been heard. M. Raoul Deslongchamps has just sent before the Surgical Society of Paris a case of aneurism of the suborbital artery treated with success by injection of perchloride of iron. It was a tumor situated in the suborbital region, affording pretty strong pulsations, isochronous with the heart's action. This tumor, for the cure of which compression had been used without effect, disappeared completely by means of the injection, as recommended by M. Pravas, after presenting some inflammatory symptoms, which easily yielded to antiphlogistic treatment.—*Dub. Med. Press*, from *Gazette Medicale de Toulouse* and *Presse Medicale Belge*.

Case of Traumatic Tetanus cured by the inhalation of Chloroform. By Dr. Th. V. Dusch, of Mannheim.—A patient, aged 26, ran a nail into the great toe of the left foot, on April 17th. On the 30th, he experienced difficulty in opening the mouth. On May 2d, the masseter and other masticatory muscles were contracted, and the mouth was closed. On the 5th, the symptoms were more severe; and on the 6th, there were tetanic spasms, returning every five minutes, combined with opisthotones. Morphine, bleeding, tobacco enemata, cupping, etc., were tried without avail. Pulse 112; skin warm. Chloroform inhalations were then directed. The tetanic symptoms disappeared during the narcotism, and the patient obtained some rest. Upon the return of the spasms, the chloroform inhalations were repeated, during which the pulse sank from 110 to 60. The author now endeavored to keep the patient in a state of constant excitement, and administered, between this date and 20th of May, 64½ ounces of chloroform.

21st.—The inhalations were discontinued; cold was applied to the shaven head, and a quarter of a grain of acetate of morphia was given every two hours. On the 4th of June the patient was well.

Dr. Bargigley of Lesbos, relates the case of a countryman, in whom tetanic symptoms came on after the ex-articulation of the third finger. The patient was cured by the same treatment.

A similar case is related in Langenbeck's Clinic.

The death of the patient in tetanus is caused by the cramps extending to the respiratory muscles and to the heart. It rarely occurs from loss of power in the brain or spinal cord, or from exhaustion. The course is usually acute, the tetanic symptoms ensuing in the following order:—trismus, cramp in the muscles of back and neck, the extremities often remaining free. Most patients die before the twelfth day. The prognosis is the more favorable the longer the disease lasts. The advantage of narcotising remedies consists in this, that the tetanic cramps become suppressed or rendered milder, and thus the respiratory act and the contractions of the heart proceed unimpaired. Chloroform, from being taken into the blood direct from the lungs, is preferable to all other narcotising remedies, which must be absorbed from the stomach. The effects of the chloroform inhalations must be continuous, the patient remaining days, and even weeks, more or less, under its influence, until a point of saturation is attained, characterized by the rapid production of the extreme narcotising effects, the patient during the intervals being in a state of obstinate excitement; head hot, face red, eyes glistening, frequent epistaxis, etc. Atmospheric air was mixed with the chloroform in Dr. Dusch's case.—*Med. Times and Gaz.* from *H. und Pfs. Ztschr., N. F.* III. 1852.

OBSTETRICS.

Successful Case of Cæsarian Section. By Dr. Decoene.—The author relates the following case of a female, aged 30, upon whom he had once before performed the Cæsarian operation. He saw the patient in the seventh month of pregnancy, November 5, 1852, together with Dr. Frédéricy. She had then been forty hours in labor; and stated, that, on the previous evening, she had experienced a breaking or yielding sensation in the lower part of the abdomen, followed by discharges of blood from the vagina, insensibility and sickness. Since that time, both labor-pains and the movements of the child had ceased. The whole abdomen was very tender. Examination *per vaginam* detected a relaxed os uteri, about the size of a dollar; but neither the head nor other part of the child could be felt, although the limbs could be traced through the abdominal walls. Inasmuch as the author concluded that the uterus had given way, and the child had escaped into the abdomen, he determined upon an operation. After making the preliminary incisions, and opening the peritoneum, he came upon a mass of congealed blood, under which was a male infant, with the separated placenta, and the membranes still entire. It was easily removed; then to the operator's great astonishment, a second child, female, came to view. Both infants were dead. The uterus, which was contracted, exhibited along its front surface a slit, answering to the line of incision of the former operation. No hæmorrhage ensued; the abdominal wound was united; and, by November 24th, the patient was well.—*Gaz. des Hôpitaux*, 147; 1852.

Sichel observes, in reviewing the above in Schmidt's *Jahrbuch*, that women, who have the good fortune to recover after the performance of the Cæsarian section, appear to be singularly liable to rupture of the uterus along the line of the former incision in every subsequent preg-

nancy. Kaysen relates six such cases. The giving way of the cicatrix in the earlier months of pregnancy may lead to escape of the ovum, and the development of an extra-uterine growth.—*Lond. Med. Times & Gaz.*

Further Researches on the Pathology of Phlegmasia dolens. By Robert Lee, M. D., F. R. S., &c.—At a late meeting of the Royal Medical and Chirurgical Society of London, Dr. Lee read a paper on this subject. The author commenced his paper by observing that it was not till the publication of the memoirs of M. Bouillaud, M. Velpeau, and the late Dr. Davis, that the true nature of this disease was known. Up to this period various hypotheses had been advanced respecting the cause of the swelling in the lower extremities of puerperal women—mere speculations unsupported by facts; but the cases and directions of the authors just enumerated demonstrated that the true nature of the disease consisted in an inflammation of the trunks and principal branches of the veins of the lower extremities. In papers by the author, published in the fifteenth volume of the *Transactions*, the actual condition of the iliac and femoral veins was ascertained, and he had been led to infer that inflammation of the veins gave rise to all the phenomena in puerperal women of phlegmasia dolens, and that it commenced in the uterine branches of the hypogastric veins, and subsequently extended from them into the iliac and femoral trunks of the affected side. Other cases had been recorded in the *Transactions*, of crural phlebitis following ulceration of the mucous membrane of the intestines. Experiments performed by Pirigott in 1839, and by Reumert in 1840, on dogs, showed that the action of chemical and mechanical irritants was limited to the vein on which the experiment was made, and the extension of the inflammation in the veins was not common; and Stanius, who had collated and tested all the facts bearing on the subject, doubted whether inflammation of venous trunks admitted of being excited by constitutional causes, independently of local irritation. A series of experiments on the veins of the lower animals similar to those just mentioned had recently been made, and a paper on phlegmasia dolens had been read to the Society during the present session, not founded on actual observation of the disease as it occurs in the human subject, but upon experiments on the veins of the lower animals in which phlegmasia dolens had never been observed. The object of the present communication was to submit to the Society the observations which the author had made during the last twenty-four years in inflammation of the crural veins. The paper contained the record of forty-three cases of phlegmasia dolens. The first nine cases were accompanied by post-mortem descriptions, and preparations illustrating the disease; and the author was led, from the whole of the facts thus adduced, to the conclusions he had formerly expressed, "that inflammation of the iliac and femoral veins gave rise to all the phenomena of phlegmasia dolens, and that the inflammation commenced in the uterine branches of the hypogastric veins, and from them extended to the iliac and femoral trunks of the affected side." The next series comprised the history of twenty cases, which the author thought furnished additional evidence in favor of this conclusion, though, in consequence of

the recovery of the greater number of the patients, an opportunity was not afforded of determining by dissection the actual condition of the crural veins. Nine cases followed, which demonstrated that phlegmasia dolens might occur wholly unconnected with pregnancy and parturition, and that in such cases the inflammation likewise commenced in the uterine branches of the hypogastric veins, and followed a course similar to what occurred in puerperal cases. In some of these the inflammation of the uterine veins was produced by cancerous disease of the os and cervix uteri; in others there was no organic diseases of any kind previously existing. The concluding cases were five, in which crural phlebitis had followed inflammation of the saphena veins, and of the deep veins of the lower extremities from fracture of the tibia and fibula, and the pressure of encephaloid tumors on the thoracic viscera. The author thought that these cases and dissections, as well as those of the distinguished authors whom he had quoted, proved in the most conclusive manner that inflammation of the iliac and femoral veins was the proximate cause of phlegmasia dolens, and that in puerperal women this inflammation commenced in the uterine branches of the hypogastric veins. It had likewise been demonstrated by morbid anatomy that phlegmasia dolens was a disease which might take place in women who had never been pregnant, and even in the male sex, and that, under all circumstances the proximate cause was the same.

Dr. Mayo inquired if, in the cases of phlegmasia dolens recorded by Dr. Lee, any peculiarity antecedent to the inflammation of the veins had been noticed?

Mr. Streeter asked if Dr. Lee had statistical information to give respecting the comparative frequency of the disease?

Dr. John Clark enquired if phlegmasia dolens, in the common acceptation of the term, and independent of other disorders, was always the result of inflammation of the veins. He thought the disease generally was very mild, and, in the experience of writers on the subject, not a fatal one.

Dr. Mackenzie said, that in the discussion of such questions as that which is now before the Society, it appeared to be important to distinguish between the facts which are alleged and the conclusions which are drawn from them. Now, in the present case, the facts alleged are that certain lesions of the crural veins are developed in the progress of phlegmasia dolens. The conclusions are that such lesions constitute the essence or proximate cause of the disease. He (Dr. Mackenzie) assented fully and entirely to the first of these propositions, whilst he dissented as fully and entirely from the latter; and as he was unwilling to enter upon the discussion of this question in a controversial spirit, he would make no reference whatever to the investigation which he had lately submitted to the Society on the subject of this disease, but would confine himself to a statement of such facts as were known to the profession, which appeared to him to be opposed to the theory of the disease which had been affirmed by Dr. Lee. The disease known as phlegmasia dolens was a very complex malady. It was one which was characterised not only by a morbid condition of the veins, but by a morbid condition of

the sensory, the motor, the lymphatic, and the secretory organs of the affected extremity also: and, accordingly, in all well-marked cases of the disease there was exquisite sensibility of the limb, especially in the track of particular nerves, loss of motor power, amounting sometimes to perfect immobility of the extremity, inflammation and obstruction of the lymphatic vessels and glands, and a general hot, tense, and elastic swelling of the limb, not simply arising from œdema, but possessing rather the character of active exudation than of passive effusion. Now, could all these lesions depend upon or be deduced from mere inflammation and obstruction of the principal vein of the extremity? Were they ordinarily observed in cases of simple uncomplicated phlebitis? Or, if not, was there anything in the anatomical or physiological characters of the veins to justify our deducing *à priori* from it? And if we replied to these questions, as he submitted that we must, in the negative, he should ask whether those who adopt this theory have undertaken any particular investigation for the purpose of determining this point? Or, in other words, have they reproduced the lesion of the veins in a simple, uncomplicated form, and observed such consequences to follow. Now, to these questions we must also reply in the negative, and it must be added that the whole matter rested purely on assumption. It had been assumed that because the crural veins were found obviously diseased in fatal cases of phlegmasia dolens such lesions constituted the proximate cause of the disease. No further steps had been taken to establish the truth of this doctrine, and that, therefore, had been taken as a matter of assumption which ought to have been made a matter of demonstration. Further, he would observe that the clinical history of the disease and the progress of symptoms did not support this theory. It was quite true that in some cases the first irritations commenced in the region of the femoral vessels, but in others it was far otherwise; in some they commenced in the back, in others in the hip, sometimes in the calf of the leg, and more frequently in the popliteal region. Again, one leg might be affected alone, or both concurrently; or the disease, after having attacked one, may pass on to the other, or a superior extremity might be affected; and he had lately met with a case in which, after symptoms of the disease had successively declared themselves in the left lower and upper extremities, the malady ultimately established itself in the right arm, the whole right upper extremity being hot, swollen, and tense, the surface exquisitely painful, with loss of motor power, and a tense, corded condition of the the basilic vein. Now, it appeared to him that these facts were inconsistent with the theory that the proximate cause of the disease was essentially inflammation of the crural veins. They pointed to the existence of some more general and diffusive cause, in regard to which it was probable that phlebitis itself was but a secondary affection. Again, he would point to the general experience of the profession as being opposed to this theory. It was now upwards of thirty years since it was first promulgated by his friend and teacher, the late Dr. David Davis; and although the facts upon which it rested were well known, it was yet very far from being generally adopted. Thus, in

this country Dr. Burns affirmed that the nerves were as much affected as the veins. Others regarded the lymphatic vessels as being principally affected; whilst many, dissatisfied with these restricted views of the pathology of the disease, preferred the theory of the late Dr. Hull, that it consisted in a general inflammation of the several organs and structures of the affected limb. So again, on the continent, the greatest difference of opinion existed respecting its nature and pathology; and whilst many affirmed that it consisted essentially in inflammation of the lymphatics, and others that it was a specific inflammation of the cellular tissue, nearly all agreed that in its general characters it differed widely from ordinary phlebitis. Now, this diversity of opinion existed notwithstanding that all were aware of the facts upon which the phlebitic theory of the disease rested, and it afforded a powerful argument against it, because it tended to show that when tested by general experience, and considered irrespectively of particular facts, and free from bias, it failed to account rationally for all the known phenomena of the disease, and consequently could be regarded as its proximate cause. Then in the sequela of the disease circumstances are met with which are inconsistent with this theory. We know, for instance, that after an attack of the disease, the crural veins were generally left impervious or obliterated, and yet it would happen that successive attacks of the disease might occur in the same extremity. Now, if it was true that the first attack left them in the condition described, it was difficult to understand how, having functionally ceased to exist, they could again take on functional activity, and become the seat of active inflammation. So also it happened after an attack of the disease, that the limb would be left for many years, or even for the remainder of life, in a weak, sensitive, and irritable condition, being easily affected by atmospheric and constitutional influences. It was easy to reconcile these facts with the notion that the nerves had been injured or damaged by the attack, but not with the idea that the veins alone had been affected. On all these grounds, then, it appeared to him (Dr. Mackenzie) that the phlebitic theory of the disease was either defective or erroneous. But assuming for a moment that it was correct, he would yet observe that it left much which was still to be explained. We had yet to learn the nature of that peculiar inflammation of the veins which was so exceptional and so different from ordinary phlebitis. Did it depend upon some peculiar disposition on the part of the venous coats to take on diffusive inflammation, or did it depend primarily upon the blood? If we adopted the first of these theories, we were bound to state the nature of the peculiarity, and the laws of its development. For to be satisfied with merely giving it a name and to speak of it as a "specific" inflammation was not to advance our scientific knowledge, but rather to take refuge, or to hide our ignorance under the shadow of a name. If, on the other hand, we accepted the latter view, and regarded the venous inflammation as dependent upon some morbid condition of blood, then, indeed, we might reasonably account not only for the peculiarities it presented, but for all the several lesions of other organs, and the structural changes with which it was

associated. Upon this view also we might reconcile the conflicting opinions respecting the nature of the disease which had been held by different pathologists, and the variations which it manifested in its symptoms and progress in different cases. But in accepting this view we must forego the theory that phlebitis was the proximate cause of the disease, and regard it, as it really was, as a secondary rather than a primary phenomenon; related to the other lesions of the extremity not so much in the order of cause and effect, but as being like them a parallel effect of some more general and diffusive morbific agent.

Dr. Lee, in his reply, entered into the literary history of the disease under discussion, from the time of Mauriceau to the present. He particularly dwelt upon the facts originally published by the late Dr. Davis, and showed at great length his (Dr. Lee's) own labors in this disease. In answer to Dr. Mayo, he said that there were no antecedent symptoms calling for any treatment. He knew nothing of the comparative frequency of the disease. In respect to the views advanced by Dr. Mackenzie, he could only say that, whilst he (Dr. Lee) admitted that there might be a blood disease present, it was consecutive to the inflammation in the veins. That inflammation was in reality the proximate cause of the disease. The scalpel had shown this; he thought that was sufficient, and could not understand what further was required.—*London Lancet.*

MATERIA MEDICA AND THERAPEUTICS.

Broma and Dietetic Cocoa.—Every body in New England, of course, is quite familiar with those two excellent articles of diet for invalids, broma and dietetic cocoa, manufactured by Walter Baker, of Dorchester, Mass. Some years since, the special consideration of medical practitioners was called to these preparations, as appropriate food for the sick, in the various conditions of debility and prostration to which they are at times reduced, leaving the digestive apparatus too feeble to appropriate any but the most delicate nutriment. Medical gentlemen of eminence in this city were delighted with Mr. Baker's broma; and from that period to this, its good character has been sustained. Another set of physicians have commenced business since that period, who may not have become familiar with the article; and we therefore refer again to the subject, for the purpose of reminding both our young medical friends at home and those at a distance, that they will derive important advantages from the use of these admirable kinds of food. Druggists in the interior would find their account in always keeping both on hand, with a view to meeting the prescriptions of medical attendants. From our own personal experience of the value of broma particularly, we can speak decidedly in its favor. A dietetic course is not unfrequently quite as necessary as strict medication; and in recovering from a low state, it is one of the perplexities of a general practitioner's life, to determine what may or may not be safely adopted as a regimen.—*Boston Med. and Surg. Journ.*

On Essential Oil of Ginger. By A. PAPOUSEK.—The root of *Zingiber officinale* contains, according to Morin, an essential oil. To obtain this in sufficient quantity, ginger was submitted to distillation with water. With the water a yellow oil goes over, which possesses in a high degree the odor of ginger, and a burning aromatic taste. Its boiling-point is 475° F., its specific gravity 0.893.

The raw oil was deprived of water by pieces of fused chloride of calcium, and kept in a retort at a temperature below its boiling-point. At 302° F. a colorless oil evaporated, which, on analysis, gave the following numbers:—

Carbon	81.03	80=81.49
Hydrogen	11.58	69=11.72
Oxygen	7.39	5= 6.79

$C_{80}\ H_{69}\ O_5 = C_{80}\ H_{64} + 5HO$. This oil is therefore a mixture of hydrates of a hydro-carbon isomerous with oil of turpentine.

As the oil acquired a darker color, and began to undergo decomposition (as was known by the formation of water) when the heat was continued, the distillation was carried no further.

The raw oil was repeatedly distilled with anhydrous phosphoric acid. The yellow distillate gave the following numbers on analysis:—

Carbon	87.99	10=88.24
Hydrogen	11.88	8=11.76

The formula $C_{10}\ H_8$ places this oil with the numerous series of hydocarbons usually characterized as the camphene series. The separation of the hydrate-water appears to be effected with equal ease by the action of muriatic acid, as by that of anhydrous phosphoric acid.

If muriatic acid gas be passed into the raw oil, the latter acquires a brown color, even if care has been taken by cooling that the action should not be too violent. The brown oil, saturated with muriatic acid, was washed with water, then submitted to distillation with water, and the product, which is of a yellowish color, and contains chlorine, dried over chloride of calcium. As shown by analysis, these operations, employed for the purpose of purification, partially decompose the muriatic acid compound, forming a mixture of a muriatic acid compound in an unchanged state with a hydrocarbon which has lost its muriatic acid. Analysis gave—

Carbon	73.39	80	73.45
Hydrogen	10.36	67	10.25
Chlorine		3	16.30

$C_{80}\ H_{67}\ Cl_3 = C_{80}\ H_{64} + 3Cl\ H$. This formula may be split in the following manner:—$3\ (C_{20}\ H_{16},\ ClH) + C_{20}\ H_{16}$.

According to this, the essential oil of ginger belongs to the same class of essential oils as the coriander oil. The ginger employed so plentifully as an aromatic in cookery, must therefore also belong to the camphene group of aromatics.—*Lond. Pharm. Journal, from Sitzungsb. der Akad der Wissench. zu Wien, and Chem. Gazette.*

On the Preparation of Tannic Acid.—On testing the method prescribed in the Prussian Pharmacopœia, for the preparation of tannic acid, Sandrock finds that it does not fulfil the desired object. In directing that water should be added to the ether employed, the authors of the Pharmacopœia would appear to have aimed at an approximation to the method originally adopted by Pelouze, in which crude ether was used; and to have assumed that when watery ether is used, the lower layer of the percolated liquid is a solution of tannic acid in water. However, Mohr found that this is not the case, but that the lower layer is a solution of tannic acid in ether; and Sandrock has obtained the same result on repeating his experiments. The addition of water to the ether is, therefore, useless, and moreover injurious, for the solution of tannic acid in ether is so thick that the percolation goes on very slowly, and sometimes stops altogether. The use of pure ether is open to the same objection.

The extraction of the tannic acid from galls may on the contrary be effected with ease by crude ether, and on account of the small quantity of alcohol which it contains. The alcohol facilitates the percolation by rendering the solution of tannic acid less viscid.

Instead of crude ether a mixture of sixteen parts ether and one part alcohol may be used with equally satisfactory results. The percolated liquid separates into two layers. The lower one containing the tannic acid may easily be separated, and yields a perfectly pure product on evaporation. The upper layer contains the gallic acid, coloring matter, and some tannic acid.

When a mixture of eight parts ether and one part alcohol is employed, the percolate still separates into two layers, but the lower one is smaller than when the proportion of alcohol is less, and the upper layer contains a considerably larger quantity of tannic acid.

Finally, when a mixture of four parts ether and one part alcohol is employed, the percolate does not separate into two layers, and it is difficult to separate the tannic acid from the impurities with which it is mixed.

By means of the above process a much larger product of tannic acid may be obtained than with either pure or watery ether. The tannic acid remaining in the upper layer may likewise be obtained by evaporating the liquid to dryness, treating the residue with pure ether, until the lower of the two layers into which the liquid separates no longer presents a green color. It is then separated, filtered, if necessary a little alcohol added, and evaporated.

The process recommended by Mohr, of treating the galls with a mixture of alcohol and ether in equal volumes, then evaporating the percolate which does not separate into layers, and regarding the residue as tannic acid, is altogether inadmissible, inasmuch as it gives a very impure product.—*Pharm. Journ.* from *Archiv. de Pharmacie.*

On Black and Green Teas.—Though the distinct preparation of green and black tea from the respective plants, the *Thea viridis* and the *Thea Bohea*, has been warmly advocated by many botanists, yet it is now

generally admitted by all parties, that green and black teas can be and are made, indiscriminately from the same parcel of leaves, taken from the same species of plant. It is nevertheless, well known to all persons, that the infusions from these teas have marked differences in color and flavour, and that the effects produced in certain constitutions by green tea, such as nervous irritability, sleeplessness, &c. are very different from those arising from the use of black tea. Their characteristic physical differences are well known; but they possess peculiar chemical properties to be noticed immediately, and which have always been ascribed by chemists to the effect of high temperature in the process of manufacture.

To explain these peculiarities, Mr. Warrington directs attention to certain changes which take place in herbs and vegetable substances dried in different modes. From observations made upon various substances of this kind, in the routine work of the establishment, to which Mr. Warrington is attached, especially the exsiccation of medicinal herbs, he had been led to form certain inferences as to changes taking places in these articles. These herbs are for the most part nitrogenous plants, as *Atropa belladonna*, *Hyoscyamus niger*, *Conium maculatum*, and others. The plants are brought to the establishment by the growers or collectors from the country, tied up in bundles, and when they arrive fresh and cool, they dry of a good *bright green* color; but on the contrary, it is found, that if they are delayed in their transit, or remain in a confined state for too long a period, they become heated, from a species of spontaneous fermentation, and when loosened and spread open, they emit vapors and are sensibly warm to the hand. When such plants are dried, the whole of the *green color* is found to have been destroyed; and a *red-brown* and sometimes a *blackish-brown* tint is the result. Mr. Warrington also noticed, that a clear infusion of such leaves, evaporated carefully to dryness, was not all undissolved by water, but left a quantity of brown *oxidized extractive matter*, to which the denomination of *Apothene* has been applied by some chemists. A similar result is obtained by the evaporation of an infusion of black tea.

The same action takes place upon the exposure of the infusions of many vegetable substances to the oxidizing influence of the atmosphere. They become darkened on the surface; and this gradually spreads through the solution, and on evaporation, the same *oxidized extractive matter* will remain insoluble in water.

Mr. Warrington further found that the green teas when wetted and re-dried, with exposure to the air, were nearly as dark in color as the ordinary black teas. From these observations, therefore, Mr. Warrington was led to form the conclusion, that the peculiar characters and chemical differences which distinguish black tea from green, were to be attributed to a species of heating and fermentation accompanied with oxidation by exposure to the air, and not to its being submitted to a high temperature in the process of drying, as has been generally believed. This opinion received some confirmation by ascertaining from parties conversant with the Chinese manufacture, that the leaves for the black teas were always

allowed to remain exposed to the air, in mass, for some time before they were roasted.

Mr. Ball, in his work on the manufacture of tea, has described in detail the whole series of these processes, fully confirming the opinion previously formed by Mr. Warrington. Some of these facts had been published in Batavia in 1844, by Mr. Jacobson in the Dutch language. In the preface to his work Mr. Ball says: "It will be seen by dates incidentally adverted to, that the facts and most of the materials of this work, were established and collected thirty years ago."—"These facts, as well as other materials, were derived from conversation with growers and manipulators from the tea districts; from written documents furnished by Chinese; from published works in the same language diligently sought out; and also from correspondence with a Spanish missionary long resident in the province of Fokin. These were all put into their present form full twenty years ago, and were read to one or two friends during my residence in China."—"They were not, however, so arranged, with any view to immediate publication."—"They were thus disposed as the best mode of recording and keeping together the facts and materials I had collected."—"But it was not till the year 1844, when I received Mr. Jacobson's Handbook on the Cultivation of Tea in Java, that I found my own views so far confirmed, and my information such, as to justify me in bringing my labors to a close."

Of these facts the following is a summary.

The processes peculiar to the preparation of black tea, are styled Leang-Ching, To-Ching, annd Oo-Ching, and these all consist in carefully watched and regulated processes of *spontaneous heating* or *slow fermentation* of the leaves until a certain degree of fragrance is developed. The leaves are said to *wither and give*, and become soft and placid. The utmost care, practical skill, and experience is required in the properly conducting these operations; and as soon as the proper point is arrived at, the leaves are to be immediately removed to the Kuo or roasting-pan. After being roasted and rolled two or three times, they are then to be dried, and this is effected in the Poey-long, which consists of a cylinder of basket-work, open at both ends, and covered on the outside with paper; it is about 2½ feet in height and 1½ in diameter, which diameter is diminished in the centre like an ordinary dice-box to one foot and a quarter. This stands over and round a small charcoal fire, and is supplied with cross-bars about fourteen inches above the fire, on which an open sieve containing the tea is placed; and a small aperture about an inch and a half in diameter is made in the centre of the tea with the hand, so that an ascending current of air and the products of the combustion pass through and over the tea contained in the sieve. A circular, flat bamboo tray is passed partially over the mouth of this cylinder, and most probably serves to regulate the rapidity of the ascending current; prevent the admission of the cold air to the leaves, and at the same time allow a sufficient outlet for the generated watery vapors and the products of combustion. At the commencement of this operation, the moist leaves are still green and retain their vegetable appearance; after the drying has continued about half an hour, the leaves

are turned, and again submitted to the heat for another half hour; they are then taken out, rubbed and twisted, and after sifting away the small dust, again returned to the sieve and drying tube. This operation of sifting is very necessary, to remove any of the small tea or dust which might otherwise fall through the meshes of the sieve on to the fire, and the products of their combustion would deteriorate and spoil the flavor of the tea. The leaves have now begun to assume their black color; the fire is diminished or deadened by ashes; and the operation of rolling, twisting, and sifting, is repeated once or twice until they have become quite black in color, well twisted, perfectly dry and crisp. They are then picked, winnowed and placed in large quantities over a very slow fire for about two hours, the cylinder being closed.

Now, that this black color is not owing to the fire is evident; for in cases mentioned by Mr. Ball, where the leaves have been dried in the sun, the same color is obtained; and on the other side, if roasted first, without the process of fermentation or *withering*, and then finished in the Poey-long, a kind of green tea is produced.

In the operations for the manufacture of green tea, on the contrary, the freshly-picked leaves are roasted in the Kuo at once, without delay, at a high temperature; rolled and roasted again and again, assisted sometimes with a fanning operation to drive off the moisture; and always with brisk agitation until the drying is completed.

The marked differences in the mode of manufacture of black and green tea, will, after what has been stated, fully account for all the variation of physical and chemical properties already mentioned.—*Quarterly Journ. Chem. Society.*

ANATOMY AND PHYSIOLOGY.

Upon the composition of the semen in old men. By Dr. A. Duplay.—Bérard, Burdach, Muller, Longet, state, that spermatozoa are absent in the seminal secretion of the aged; Wagner alone asserts, that, in men of seventy to eighty years, these bodies are found in the vesiculæ seminales, if not in the testicle. Facts tend to prove that the fecundating power is retained up to the age of 100. The author investigated the semen in fifty-one subjects, after death caused by various diseases. In its physical properties the semen was sometimes of yellow color, as in the adult; generally of a paler straw hue, or almost colorless, milky or creamy. In twelve cases it was thick; but, in the greater number, it was serous, though mixed with the usual mucous secretion from the vesiculæ seminales. In most cases the vesiculæ seminales were full of fluid; in one only were they atrophied. The semen in the vasa deferentia was always darker-colored than that in the vesiculæ.

In thirty-seven cases the author remarked the presence of spermatozoa; in fourteen he failed in detecting them. In twenty-seven cases they were such as are usually seen in the healthy adult; in the rest the tail was shorter, and the head sometimes separated. Once he saw a number of crystals, whose nature he could not investigate. Considerable variety existed in their proportion.

In twenty-six cases, spermatozoa were found along the whole tract of the spermatic passages; three times only in the vas deferens; once only in the fluid of the vesiculæ seminales; seven times in the vesicula seminalis of the left side only. In the latter cases there existed mostly degenerations of the testicle, or obliteration of some part of the seminal duct. Secretion of semen continued, however, in cases where there was considerable atrophy of the testicle; the highest weight of which was 11·98 grammes; the lowest 4·50 grammes. The tissue of the testicle was always normal; the epididymis contained occasionally cysts. In four cases there was hydrocele. In the fourteen cases where there were no spermatozoa, the subjects had passed the age of seventy; but there were no special changes discoverable in the glands. The secretion of semen, concludes Dr. Duplay, continues in old men, but in a less degree; their semen contains spermatozoa even when the person is beyond the age for fecundation. The cause, therefore of want of power to effect this end cannot be explained upon the idea of the deficiency of spermatozoa.—*Medical Times, from Arch. Gen. Dec.* 1852.

Discovery that the Veins of the Bat's Wing (which are furnished with valves) are endowed with Rythmical Contractibility, and that the onward flow of blood is accelerated by such contraction. By T. Wharton Jones.—In entering on the investigation of the state of the blood and the blood-vessels in inflammation excited in the web of the bat's wing, I applied myself, in the first place, to the study of the distribution, structure, and endowments of the arteries, capillaries and veins of the part, and of the phenomena of the circulation in them.

I had not observed the circulation under the microscope long, before I was struck with something peculiar in the flow of blood in the veins; I therefore directed my attention to them, and discovered that they contracted and dilated rythmically. Following the veins for some extent in their course, I further discovered them to be provided with valves, some of which completely opposed regurgitation of blood, others only partially.

The cause of the peculiarity in the flow of blood in the veins was thus no longer doubtful; but some continued observation was required before I was able to make out exactly its mode of operation.

The act of contraction of the vein is manifested by progressive constriction of its caliber and increasing thickness of its wall; the relaxation of the vessel, by a return to the former width of caliber and thickness of wall.

The rythmical contractions and dilatations of the veins are, in the natural state, continually going on; but sometimes with greater, sometimes with less rapidity, and sometimes to a greater, sometimes to a less extent. The average number of contractions in a minute, I have found to be ten. I have on some occasions counted only seven or eight, and on other occasions as many as twelve or thirteen. Most usually, the numbers were nine and eleven. The supervening dilatations take place rather more quickly than the contraction. The amount of constriction of one of the larger veins,—one about 1-300th or 1-400th of an inch in

width when dilated,—at each contraction of its walls, may be put down at a fourth or fifth of its whole width when in a state of dilatation; I have sometimes estimated it at nearly a third, sometimes at not more than a sixth.

The contractions *centrad* and *distad* of a valve appeared to be simultaneous, as did also the dilatations.

The smaller veins, those of the first and second order, proceeding from the radicals, contract, but not in a very marked manner, and are destitute of valves.

During contraction, the flow of blood in the vein is accelerated. On the cessation of the contraction, the flow is checked, and a tendency to regurgitation of the blood takes place, which brings the valves into play. Where the valves are perfect, the backward movement of the blood is at once stopped by their closure; but where the valves are not complete, the blood regurgitates more or less freely.* But this check to the onward flow of the blood is usually only for a moment or two. Already, even while the vein is in the act of again becoming dilated, the onward flow of blood recommences and goes on, though comparatively slowly, until dilatation is completed and contraction supervenes; whereupon acceleration of the flow takes place as before.

It is to be observed, that in determining the flow of blood in the veins (the phenomena of which I have now described), the action of the heart is concerned as well as the contractions of the veins themselves. It appears to be the heart's action which maintains the onward flow of blood during the dilatation of the vein, whilst it is the contraction of the vein, coming in aid of the heart's action, which causes the acceleration. Sometimes the *vis a tergo* is sufficient to keep up a pretty steady flow in the veins, this being only accelerated at each contraction of these vessels.

The check to the flow of blood in the veins takes place at the completion of the contraction or commencement of the dilatation. The number of checks observable in a minute, therefore, corresponds with the number of contractions. In one case, while an assistant marked the time by a seconds' watch, I observed that a complete valve checked the tendency to regurgitation nine times in a minute; and on counting the number of contractions of the same vessel, I found them also nine in a minute. In another case, eleven checks and eleven contractions were counted; and so on repeatedly. Though I quote these little experiments, I would remark that, after some practice in the observation, the eye is quite able to take in at one glance the succession and relations of the two phenomena.

The valves of the veins are composed sometimes of but a single flap, sometimes of two. In the situation of a valve, and *centrad* of the insertion of its flaps, the veins present the usual dilatations or sinuses corresponding to the sinuses of Valsalva at the origin of the pulmonary

* Sometimes, as for example, into a venous branch with an incomplete valve, a retrograde flow of blood takes place from a large vein, at the moment this latter is contracting and propelling its blood onwards.—May 7, 1852.

artery and aorta. These sinuses are best seen when the valve happens to present its flaps edgeways to the observer.

Valves are found close to the entrance of a large branch, but distad of it. They are also found at intermediate parts of the veins. Tracing the veins from radicles to trunks, the first valves I have noticed were at the junction of the second order of veins to form the third.

In watching the circulation, it is interesting to observe the backward eddy of blood-corpuscles into the sinuses of the valves, when the blood issues from the narrow valvular opening into the wide part of the vein beyond.

In structure, the valves are seen to be a reduplication of the clear innermost coat of the vein, with sometimes a pretty evident layer of fibrous tissue intervening.

Each vein is closely accompanied by an artery, a nerve only intervening. The average diameter of a vein is to that of its accompanying artery as about 3 to 2.

The contractility of the arteries is altogether different in its nature from that of the veins. It is *conic contractility, not rythmical.* On the application of pressure over an artery, this vessel may be seen to become constricted, sometimes even to temporary obliteration of its caliber, and that uniformly throughout some extent of its course, both above and below the point where the pressure was applied; or, the constriction is greater or less at intervals, so that the vessel presents a varicose appearance. This tonic contraction of the arteries of the bat's wing does not take place quite so quickly as the same phenomenon in the frog's web, and, ordinarily, continues a longer time.

The pulsation of a vein so affects its accompanying artery as to push the latter, as a whole, to and fro. That the movement of the artery referred to is really owing to this cause, and not to any pulsation or rythmical contraction and dilatation of its own walls, is evident from this, that the movements are synchronous with the contractions and dilatations of the vein, and that *both sides of the artery move in the same direction,* not approximating and receding from each other, so as to constrict or dilate the caliber, as in the case of the vein.

I have not been able to observe unequivocal evidences of tonic contractility of veins in addition to their rythmical contractility. When pressure is, at the same time, applied over the vein as well as the artery, the vein is not found to become tonically constricted in the same manner as the artery, upward and downward. At the place where the vein was pressed on, a mechanical indentation of its wall may perhaps be seen. And, in addition to this, there may often be observed an appearance of great and abrupt constriction. This appearance, however, is not owing to contraction of the walls of the vein, but to a deposit of a viscid-looking grayish granular lymph within the vessel at the place, obstructing its channel and narrowing the stream of blood. On watching, I have seen portions of this deposit detached and carried away by the stream of blood, with corresponding enlargement of the channel, and again an additional deposit with renewed narrowing of the stream. When the pressure has been considerable, I have seen the vein become for a time wholly obstructed by the deposit. A similar deposit of lymph takes

place in the artery. In one case, I observed that the artery, at the place pressed on, was actually not so much constricted as above and below, though, on account of the narrowness of the stream of blood from the presence of the lymphy deposit, it appears as much so at first sight.

Having subjected the web to the galvanic influence from a single pair of plates, I found all the smaller arteries of the part in a state of considerable tonic constriction, but the larger arteries constricted in a less degree. The effect of galvanism on the veins appeared to be to render their rythmical contractions somewhat more brisk, they having been previously rather languid. On cutting a vein across, I did not observe tonic constriction of it, any more than in the frog.

After the application of a drop of vinum opii to the web, the veins were found dilated as well as the arteries, and their rythmical contractions appeared to be suspended.

It has been stated, by an authority not liable to err, that, on mechanical irritation, both artery and vein of the bat's web gradually contract and close, and, by and by, dilate wider than before. And, again, that in bats, contraction of veins is quite aswell marked as that of arteries.

These statements, it will be observed, imply tonic contractility of the veins.

Notwithstanding my attention has been repeatedly directed to the point, I have not, as previously stated, been able to observe unequivocal evidences of tonic contractility of veins, in addition to their rythmical contractility. For this reason, I cannot help venturing on the supposition that Mr. Paget must have made his statements either from a hasty and imperfect observation of the proper rythmical contractions of theveins; or, seeing that in rythmical contraction of the veins, the constriction is never to closure, like that of the arteries, under some such misapprehension as to the nature of the vessel observed, as he certainly must have labored under when he supposed that arteries and veins of the second and third order open directly into each other without any intermedium of capillaries.

The arteries and their subdivisions anastomose freely with each other, forming a network all through the web, the meshes of which go on to diminish towards the free margin. Each artery, and each subdivision of an artery, is closely accompanied by a vein; and these veins, like the arteries they accompany, anastomose with each other. But it is to be remarked, that nowhere do the arteries and veins directly communicate. The only communication is the usual one through the medium of capillaries. The capillaries, the walls of which are destitute of contractility, received the blood from small arterial twigs, which arise from the arterial network, and return it to the venous radicles which open into corresponding veins. These arterial twigs, capillaries, and venous radicles, form networks within the meshes of the great vascular network, and a looped network at a margin of the web.

The observations recorded in the preceding pages were made principally with one-eighth of an inch object-glass, and the two lowest eye-pieces, affording magnifying powers of 370 and 550 diameter.

The web of the wing was stretched out on the object-plate, wetted on both sides with water, and covered with a thin plate of glass at the spot to be examined.

Appendix to the foregoing Paper.

In consequence of the dark pigment in the cells of the epidermis of the web of the bat's wing, the structure of the vessels cannot be well made out except by dissection.

A small piece of the web containing vessels being detached and disposed in a drop of water, under the simple microscope, the two layers of skin may be readily torn from each other with needles, and the artery and vein, with their accompanying nerve, which lies between the two, separated in one bundle.

In pieces cut out of a web which had been dried, the bundle of vessels and nerve was, after tearing away the skin, left surrounded by a sheath of cellular and elastic fibres disposed longitudinally; but in pieces cut out from the living web and directly examined, this sheath was always detached along with the skin, and the vessels, with their accompanying nerve, at once laid bare.

Both artery and vein are seen to have a middle coat of circularly disposed muscular fibres; but the appearance of the fibres is different in the two vessels.

The fibres of the vein are about 1-3600dths of an inch broad, pale, grayish, semi-transparent, and granular-looking. In general aspect they very much resemble the muscular fibres of the lymphatic hearts of the frog. In none of the muscular fibres of the vein, however, did I detect an unequivocal appearance of transverse marking.

The fibres of the middle coat of the artery are not so pale-looking as those of the middle coat of the vein, are clearer, and exhibit a more strongly marked contour.

Second Appendix.

From a microscopical examination of the bloodvessels and circulation in the ears of the long-eared bat, I have ascertained that, different from what I discovered to be the case in the wings, the veins of the ears are unfurnished with valves, and are not endowed with rythmical contractility, and that the onward flow of blood in them is consequently uniform. I ought, perhaps, to qualify the statement that the veins of the ears are not endowed with rythmical contractility, by saying, that I think I noticed a very slight tendency to it here and there in a vein, but so slight as not to have the smallest effect on the flow of blood.

This observation regarding the ear of the bat illustrates how that the heart's action is sufficient of itself for the circulation of the blood in the body generally; but that being sufficient for that only, the supplementary force of rythmical contractility of veins, supported by the presence of valves, is called forth to promote the flow of blood in the wings, which on account of their extent, are, as regards their circulation, in a considerable degree, though not entirely, beyond the sphere of the heart's influence.

I may take this opportunity to mention, that I have also found the veins of the mesentery of the mouse destitute of rythmical contractility. —*Philos. Transact,* 1852.

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THE

MEDICAL EXAMINER,

AND

RECORD OF MEDICAL SCIENCE.

NEW SERIES.—NO. CIV.—AUGUST, 1858.

ORIGINAL COMMUNICATIONS.

Naval Hygiene. By G. R. B. Horner, M. D., Philadelphia, Surgeon U. S. Navy.

This branch embraces a great variety of subjects relating to the health of seamen. On it their strength, spirit and, necessarily, their efficiency depend; without it commerce must suffer, and in time of war the honor and defence of the country could not be maintained against a powerful maritime nation, whose seamen are as brave and numerous and more healthy than our own. It becomes us, then, to consider the means best adapted to prevent this, and, if possible, to render them superior in every respect. At the same time we do that, we must not neglect to refer to the means suitable to preserve the health of our extensive mercantile marine. For these purposes the first means to be taken are those intended to procure vessels properly constructed regarding the comfort and health of their occupants; for, if they be confined to small, filthy and ill ventilated apartments, other means taken may be of no use. Ships of war are often built for sailing and fighting only, merchant ships for beauty and holding large cargoes.

Hence, the quarters, in both, for the crews, and especially for the men and officers of subordinate grades, are very small proportionally to their number, besides being so constructed that pure air is nearly unknown in them. It is even common to witness this in vessels wherein the cabins and saloons, intended for the passengers and officers of the highest grades, are as spacious and airy as they can be made. In no class of vessels are we more struck with these facts than in packets and steamers. In the latter, engaged in trade between the eastern coast of the United States and the western coast of California, I observed this contrast in accommodations. While the cabin and steerage passengers were lodged mostly in separate state rooms and had sumptuously furnished saloons or cabins adjoining, the forward passengers were crowded in berths near the bows or about the forecastle. Some of them were occupied by two or three persons in each one, and were so short that no man of good height could lie in them at full length. To escape from such discomfort, which was rendered intolerable from the heat of the tropical sun added to that issuing from vast fires of coal, many passengers fled nightly to the highest decks and slept upon them. Of the sufferings of the forward passengers we may form an estimate, when informed that a number of the best accommodated cabin ones deserted their rooms and slept on the quarter deck beneath the awnings, so great was their heat. To ship builders and naval engineers belong the general construction and arrangement of vessels, and we would not recommend any medical interference with them in most matters, or where mere comfort and convenience are concerned. But in things relating to health, courtesy as well as public and private interests demand that medical men should be consulted. Whether these be or not, the former should endeavor at least to have all parts of a ship made salubrious; to have the hatches well placed for both air, light and the escape of effluvia; the air ports of large size, and so situated that they could be opened either in calm or stormy weather without the admission of rain or sea water. For the escape of heated air, animal and other exhalations, the newly adapted ventilators passing through the upper decks in parts not used as gang ways and not occupied by guns, &c., ought to be preferred. These ventilators have tops closed above and open at the sides, and answer the indications above mentioned, and from being of cast iron are very durable.

To ventilate perfectly and expel noxious gases, as well as overheated air, windsails are indispensable. They are very large and long cylinders or bags of canvas, open at bottom and expanded at top into a capacious mouth, presented to the wind, and held open by lines attached to their elongated sides. Hoops within prevent their collapse. These windsails are suspended from the rigging by other lines, and can be let down through the hatches far enough to ventilate the lowest parts of vessels. All those of our navy are thus purified, and made vastly more healthy and comfortable than ships were before the introduction of windsails.

But the part of every vessel most demanding the care of the physician is that used by the infirm, and known in men-of-war as "the sick bay." In those of our country it is almost without exception on the berth deck, either in the bows or amidships between the fore and main hatch. The former place is its location in ships of the line, and frequently the latter is that in vessels of smaller size. In our steamers the machinery will not allow of the sick being kept amidships, and abaft there is no room for them; hence from necessity they have to remain forward. This is the case even in the San Jacinto, one of our largest steam frigates, and more than 220 feet long. She indeed has no separate place for the sick; they have to lie near the fore hatch of the berth deck, and are exposed to both the heat of the galley or cooking range just abaft them, and to the intense fires in the adjacent furnaces generating steam, in the hold below. She has no gun deck nor other place of refuge (save the spar one) from such heat, for the halt or sick, by day or by night; and if it rain, or the weather be cold, or the wind strong, they have the unhappy alternative of bearing its chilling blasts, or of closing the hatches and being stewed in steam. From the description by the crew of what they suffered from these causes—the flooding of the berth deck by the sea through the horse holes at the bows of the same deck, the deluging of it by rain, the seas shipped, and the water thrown upon it in the coldest weather to clean it—we can rationally infer, that though she cannot be called a floating hell, she might be well termed a steam purgatory. Of the Saranac the same remark might be applied with good reason.

In the English ships of war I have visited, the sick were

placed on one of the gun decks, and on both or only on one side of the bowsprit. This position is most desirable from its being generally the least in the way; but when the men are letting out or heaving in a cable, or the ship is in a heavy sea, plunging deeply and buffeted by waves driven on by a head wind, it is very noisy, and often deluged by the water forced into the ports, seams and horseholes, or those through which the cables pass. The motion, too, in the bows of a vessel, is very great at such times, and renders them altogether unfit for patients ill of low fevers, from the depressing effects on the brain; or for those who suffer much from sea sickness, or who have fractured limbs. In these cases, while ships are at sea, it is always necessary to remove the patients abaft, and I usually place them near the middle of one of the gun decks. While I was in the John Adams, on a voyage from Minorca to Naples, thence to Marseilles, and back to the former port, a most striking instance occurred of the ill effects of a ship's motion on a case of the first kind, or that of low fever. The patient was a boy of that island, for the first time at sea, who suffered from excessive sea sickness and intermittent fever, to which he was liable. Accordingly, as the wind was light or strong, the sea smooth or rough, the ship in port or out of it, easy or uneasy, so the type of the fever was of ordinary height or of the lowest kind, and deprived him of nearly every sign of animation. When thus affected, his teeth were covered with dark sordes, his eyes sank, his pulse was rapid and scarcely perceptible, his face livid, and he sank into such a state of insensibility, that he was only to be kept alive by quinine, applications of turpentine and cantharides ointment, and other stimulating remedies. In this manner he lived until he got back to his native place; but when she was about returning to Naples, he could not remain in her, was sent to the Lazaretto of Port Mahon, and there died under the charge of a Spanish physician. Reference has been made to this case in my work on the Mediterranean; but it has been again introduced, as it is finely illustrative of the bad influence of a ship's motion on some patients.

To make the sick more comfortable, it is also very essential that they have a privy convenient to them, and be as little as possible exposed to being struck by the sun; that they should have well made and covered easy chairs with copper pans, which are

difficult of being broken, and require a long time to become corroded. Porcelain pans are too easily fractured, and tin ones very soon are rusted and rendered useless. A hatch directly over a sick bay is of great advantage; it affords plenty of light, admits a windsail, and enables the medical officers and patients—both those affected with disease and those injured by accident—a ready way of egress and ingress. When there is no such hatch, and a person is severely injured, it becomes necessary to drag him during sleeping hours beneath the hammocks of the crew to get him into the hospital. To do this is difficult and painful to him and carriers, from the hammocks being hung only a few feet above the deck, and obliging the latter to stoop very low while they drag the former. Another great convenience is that of having the dispensary and store room adjoining or near the sick bay, so that articles can be had for patients without delay. But in time of war the greater part of medical stores should be below water mark, and secure from damage by an enemy's shot. A single one, and especially an explosive shot, might otherwise smash all the bottles of the medical department and leave no liquids for use. This misfortune might frequently happen in our men of war of the present time, for in all of the corvettes, and in most if not all our frigates, the dispensary is on the berth deck. In former times it was in the cockpit of the last, and below water mark. Want of air and light, and the inconvenient distance of the former from the sick, have probably caused the change of place, besides many annoyances from the numerous store rooms opening into the cockpit, and its proximity to the spirit room and after magazine. When these are open no lights are allowed to be burnt, and of course the darkness prevents the compounding of medicines and other work being done. When they are immediately required, this is a great inconvenience to the sick and their attendants. In time of action, or any other, when the crew are at quarters, the wounded or injured sent to the cockpit must receive attention, and the use of covered lights is then permitted.

With a hospital arranged as above described, patients, unless over-crowded or affected with contagious diseases, will mostly improve under judicious medical advice. Should any be affected in the last manner, they ought to be forthwith sent on shore

where it be practicable, or placed in the most airy and least frequented parts of the decks, either lower or upper. There they should be hung in cots; or hammocks, if there be none of the former to be had; put behind screens, and allowed to hold no communication with any other persons than their nurses and physicians. If small-pox exist it will be very desirable that the former should have had it by inoculation or naturally, or that they be known to be well protected by vaccination. But, should this sovereign preventive have been properly practised among a crew before or after shipment, it is very improbable that they will ever become extensively infected with small-pox. Therefore, every one of a crew in the least liable to it should be vaccinated as soon as he gets on board ship, and while the vaccine matter can certainly be obtained fresh. If it be not, it will prove useless, according to my experience;—for, of the many hundred persons I have vaccinated or caused to be, in various ships of war at sea, scarcely one gave any evidence of having been infected with the virus. The same remark was made by a surgeon of much greater experience than myself. So many failures may have been owing to other causes, as gross diet—the adult state of a great majority of the crews—and their greater unsusceptibility to impression from the hardness of their skins, and loss of sensibility. Some may ascribe the failures to the influence of sea air, but none of these things are known to be facts. This, however, is an acknowledged and well proved one. Old vaccine matter has often failed to produce its peculiar effects on persons ashore with every adjuvant required to insure success. Neither the purest air, nor best diet, nor well adapted clothing and most able medical advice have been of any service. The punctures have, notwithstanding, healed and left no cicatrices, and the vaccinated have remained unprotected from variolous contagion. To escape it in very cold weather is most difficult, from it being necessary then to make vessels of comfortable temperature; from their crews being thickly clad, and seldom changing their clothes; staying much below decks; crowding together in warm places; closing ports and hatches, and stopping ventilation. When this cannot be done, they become exposed to too much cold, suffer from pulmonic complaints, rheumatism and chilblains, and hence have a choice of the two evils—contagion, or the suffering caused

by these affections. Sometimes a ship may be kept very close below and open above, as was the Brandywine in the winter of 1830, at New York. To that fault we ascribe the complication of the above diseases herein suffered. In her were mingled cases of small pox, scarlatina, typhus fever, and every other affection it seemed which could be induced by intense cold. Luckily some of the former cases were sent to the naval hospital before the crew were extensively infected. But by the time the ship left port, in March, she had lost one man from scarlatina, sent thirty altogether to the hospital, and had forty more on the sick list. In a few days after sailing, three more persons died of the same disease and typhus, and in the course of a few months others of the crew had been similarly lost. Among them was the sergeant of marines, Clargis, a noble looking, accomplished soldier, who had had a violent pneumonia terminating in mortification of the lungs. His sufferings were indescribable; so great and protracted were the dyspnœa and difficulty in expectorating the exceedingly fœtid sputa which for day after day were discharged, to the disgust of the whole crew.

So much was due to the fitting out of a man of war in winter! a practice ever to be condemned or avoided. There are two other practices in ships almost as condemnable; one is, that of dry *holy stoning*, or rubbing the decks with huge stones and sand; the other practice is that of deluging the former with water in the coldest weather, even when it freezes as soon as thrown upon them. Dry holy stoning is intended solely for good appearance and cleanliness, washing decks for the same purposes and to keep them tight. In doing this the men generally go barefooted, and suffer proportionally from the conjoined ill effects of cold and moisture, inducing rheumatic and pulmonic complaints. By holy stoning the chief mischief is done to the eyes and lungs, which inhale the impalpable sand floating in the air, and become irritated. To this cause is attributed the death of the master-at-arms belonging to the vessel named, and who became affected with phthisis pulmonalis. Cases of ophthalmia arise and are aggravated from the same cause. But when the sand is wet it may be rubbed on the deck without injury; and in mild weather washing them does little harm—unless on the lower ones—from their continuing wet a long time, and may be

of advantage, from the men getting their feet cleansed, who, if the decks were not washed, would seldom have them so. To obtain a like condition of the whole person, bathing in fresh or sea water should be practised by a crew, whenever it be of moderate temperature. Though buckets and tubs sufficient could not be had for a large number of men, they might bathe on a beach, or at sea, by having boats rowing about them and letting down sails into the water by the four corners for the use of inexpert swimmers, as I have often witnessed, when the sea has been calm. Bathing, besides being a very healthy practice, from its tonic and cleansing effects, is a fine amusement, and for this reason, if no other, ought to be encouraged. Like music, dancing, playing at dice, chess, draughts and dominoes, it takes away the monotony of sea life, makes time pass pleasantly, and creates good will in a crew. Water is still more highly recommended for drinking, and unless it be pure, it is vain to expect good health in any vessel on a voyage, and cut off from the means of procuring substitutes when it is impure. When good, it is the only drink seamen can use freely with general impunity; and nothing laid in for their sustenance makes them so efficient and so comfortable. It is an indispensable article with them, and one for which no substitute can be found. This is not so with any other; if the pork be bad, the beef may be good; should the bread be mouldy and wormy, the rice may be sound; if the cheese be spoiled, an additional quantity of butter can be allowed. The same may be done with any other part of the rations. Bad water, too, may be as injurious in port, and sometimes more so than at sea, when sailors at the same time indulge in eating fresh meat, fruits and vegetables, especially the crude, unripe and acid ones. If these be eaten at the same time that brackish water is drank, or that obtained from fountains and rivulets just after heavy rains, and charged with earthy matter, they never fail to produce bowel affections. The greatest number which have ever come under my notice have been caused in this manner; and I always expect as a matter of course, when between the tropics, or it be summer anywhere, to have at once a large number of such affections to treat. But by far the largest number have been seen among crews drinking the water of the La Plata, or that taken from its shores. Neither should it be used before

it is purified by being allowed to work, or by strainage, or throwing into each cask a small amount of powdered alum, which is thought at Buenos Ayres the best purifier, and ought to be proportioned to the quantity and impurity of the water. For the consumption of a small number of persons, dripstones may furnish as much pure water as they may need for drink; and in the Mediterranean, from the vast quantity of porous sandy limestone found on its shores and islands, these stones can be easily obtained at a low price. At Malta they are very plentiful, and so cheap, that every vessel touching there ought to lay in a supply for both present and future use; for after they have been used for some time, the impurities of the water strained fill their pores and impede its flow, so much as to prevent this being abundant. Should a crew be large, other means must be adopted, and none answer so well as large casks, set on end like a common scuttle-bat, and having either a strainer at bottom made of several layers of bunting or of hair cloth, resting on a grate and covered with gravel and sand; or having a patent strainer of silver gauze, with a clean sponge fixed inside of it. The frigate Savannah had a strainer of the latter kind, which was attached to the scuttle-bat when necessary, and was thought very good. For the use of my patients in the Delaware I employed a strainer of the former kind, holding only five or ten gallons of water, and for the same purpose in the Savannah used a large stone filter, which had a double bottom and a chamber above, with a hole in the centre into which a sponge was placed. The water ran through this, thence percolated through a layer of sand and a strainer beneath—got into the lowest chamber and was drawn off by a stop-cock in a limpid, pure condition. For a sick bay I prefer this filter* to any other, from its convenient size, easiness of being cleansed and repaired, and so well answering the purpose for which it is designed. Other filters perhaps may be obtained to answer as well, and there is no excuse for a vessel leaving, at least any of our ports, without having some of them. In steamers there is less demand for them, from the great ease with which their immense fires can by means of retorts or alem-

*It is said to be one of Wainwright's of Staffordshire, England, which have gravel and charcoal mixed with the sand, contained in the middle or closed chamber.

bics, convert salt water into fresh. Whether water thus distilled is as wholesome as that impregnated with some saline or earthy matter, is a subject of doubt, as in some persons it has caused diarrhœa, and it, moreover, when so purified, is insipid and unpalatable.

Of the best methods of preserving and purifying water, much has been written. Some have recommended a small amount of quick lime and sulphuric acid to be put into each cask; some have used muriatic acid, others calcined lime or pure charcoal, with a little sulphuric acid; others have put in powdered charcoal alone, or charred the casks inside. This is a very common method of purifying them when old, and though it may not have any great efficacy in preserving the water, it certainly has some in preventing the decay of the casks. The charcoal itself, likewise, when put into the water, acts both as an antiseptic and destroyer of fœtor arising from the formation of sulphuretted hydrogen. But I prefer filtrating impure water through charcoal, when confined in a chamber or other place suited to hold it and prevent its rising to the surface, as its lightness will certainly cause it to do when thrown loose into the water.

Provisions.—Such a variety of them are now used at sea, that it would be superfluous to enumerate them or do more than write a few remarks respecting some of the principal. Of these the two most used are bread and meat. The former in all ships is commonly biscuit made of wheat flour,—sometimes of this and rice mixed, when the former is very dear, as in Brazil. The hardest bread I ever saw was obtained at Bahia, and was said to have been thus made. It was too hard for any ordinary teeth to chew, and required hammering to be got into fragments. It is hardly necessary to say that such bread, and the wormy, mouldy and sour, should be condemned. Indeed biscuit generally is difficult of mastication and digestion, from its toughness, and is neither savory nor wholesome, unless dried and crisped in an oven just before it is eaten. Next to bread, rice may be ranked as the most valuable vegetable food. Though it is insipid, and constipates most persons, it can be easily rendered palatable by seasoning, and prevented from producing costiveness by mingling it with stewed fruit or molasses. For the sick

I have found rice invaluable in bowel affections, either in the form of a gruel or drink, or when simply boiled and flavored with any pleasant condiment. In this state my patients, almost without exception, have preferred it to arrow root or any other of the farinaceæ, which have a flatness of taste—evils to be overcome only by high seasoning with wine, sugar, lemon juice and spices, rendering them as rich as prohibited meats. Of these, any which are preserved by being first cooked—by boiling or roasting—are to be preferred for the sick or well, to all dried ones, or any preserved by being put into brine, either of salt alone or that and nitre. Both of these articles so impregnate flesh of all kinds as to make it hard and insoluble in the gastric juice. It then creates irritation of the stomach, causes unnatural thirst, and is altogether difficult of assimilation, besides impregnating the system with a superabundance of saline matter. The first ill effects observed afterwards are ulcers in the mouth, phlegmous in different parts of the body and limbs, and finally scorbutic symptoms. To avoid, then, these and other evils resulting from salt provisions, as little of them as possible ought to be used, and when they are, they should not be cooked before they have been first soaked at least twenty-four hours in fresh water, and subsequently washed in it after it has been changed. Preserved fresh meats are dear in appearance, but if we calculate their superior niceness and wholesomeness; their freedom from bone, gristle and other useless parts; their not requiring more fire than enough to rewarm them, and the very little space occupied by the canisters containing them; the very perfect manner in which these meats are kept sound for an indefinite time, and the vast amount of salt meats lost from corrosion by the brine, and putrefaction from various causes, we may very safely conclude that the latter meats are dearer than the fresh preserved. On the coast of Brazil, where these cost 45 cts. per pound, I found them decidedly cheaper than live fowls at six dollars per dozen, from the great mortality among them at sea. Even when they do not die, they often become sickly, waste away, and afford poor nourishment. The same may be said of other live stock, save, perhaps, pigs; and when not correctly, it is in rare instances,—from fine weather and great care in feeding. When this is not done, they are illy watered—the vessel labors much, tosses

them about and keeps them wet; they soon droop, get feverish, and become unfit for use by the sick or well.

With fresh preserved meats we must likewise recommend vegetables which have been cooked in a similar manner and hermetically sealed in tin cases and bottles. There are also a large quantity of vegetables now reduced by heat to a very dry state and sealed in tin boxes, but when taken out and put into boiling water, resume their wonted freshness and plumpness. The best I have seen were prepared in France, and had been sent to the Chief of the Bureau of Provisions and Clothing of the Navy, for inspection and trial. They gave such satisfaction that we hope they will come into general use and be prepared on a large scale in our own country. In addition to the above articles, preserved soups, custards and milk ought to be laid up for sea stores, at least for short voyages, and as is now practised in some packets. By the aid of ice it may be easily effected, though the articles be not put in sealed vessels. In ships sailing from countries where ice abounds, it might be stored away at a very low price, in sufficient quantities to last for months, without any great inconvenience as regards room. On my passage in the Crescent City from Chagres, all our meats were said to have been preserved on ice laid in at New York, abundantly enough to last both during her outward and homeward passage. Of spirits, wines and malt liquors, it is necessary to procure a supply for culinary and medicinal purposes. Habit, too, renders them requisite for some persons, and the palates of others may make them indispensable as articles of luxury. But for the treatment of invalids, I have by long experience found them of minor importance with respect to articles decidedly medicinal. As diffusible stimulants in cases of emergency, they are serviceable; but as tonics or medicines, used to produce a permanently invigorating effect, they are much inferior to the vegetable bitters, and if any stimulation be required, it is much better to infuse these in a small amount of spirits mingled with water. This also is preferable, because it prevents patients from having it in their power to say that the "doctor recommended them to drink spirits," and to urge this as a plea for their continuance when well.

The next subject claiming our notice, and the most important to the sick, is the laying up of all the medicines, implements

and appliances needed for them. In their selection we must determine how many are needed, and next the quantity of each one which may probably be required. In determining this we must be governed by the space allowed to accommodate them, the number of the crew, the length of the proposed voyage, and the amount of sickness anticipated. The ability or inability to procure a re-supply where the vessel is bound, and the abundance, cheapness or dearness of certain medicines there, ought also to regulate the quantity to be primarily obtained. It is very bad economy to fail getting a full supply of articles which are exorbitantly high abroad, and equally bad to lay in such at home when they are perhaps native products of the countries to be visited and correspondingly cheap in them. This is a familiar blunder, and committed in many vessels; and the only good reason for it is that it encourages domestic commerce and causes money to be expended at home. While laying in medical stores also, we ought as much as possible to obtain the most efficient of every class—to get them in the most concentrated form, so as to occupy the least space—to put aside crude articles and procure their active principles—and to have all medical stores, whether in drawers or boxes, well secured against rats, mice and vermin, by means of tin or other metals, and to have these well painted externally, to prevent corrosion by rust. The medicines likewise should be put in packages and bottles, perfectly air and water proof, and adapted in shape to the places wherein they are to be kept. As a general rule, the former store most conveniently and take up least space when square. It will be found in fitting up either a medicine chest or a dispensary, that when round they require about one-half more room—a vast deal to lose when not enough is allowed, although storage is made in the most economical method. One of the strongest objections to laying up an overplus of medical stores, or not packing them closely in a dispensary or chest, is that it makes it necessary to put the surplus in the hold. When this happens, they are apt to be lost and pillaged; they cannot be got for immediate use without inconvenience; and give so much trouble to those having charge of the hold that they complain, and quarrels result between them and the persons belonging to the medical department. From medicines being kept in the hold I have frequently,

under the belief that there were none of a certain kind in it, obtained a fresh supply, when an abundance was there, as proved by their having been subsequently found. On one occasion I was positively informed that no alcohol and Epsom salts were in store; a re-supply was ordered and purchased, and after it had been brought on board, four gallons of the first article and a barrel of the other were discovered in that part of the hold called the spirit room. The prohibition of lights in it makes such oversights more easy; but in the latter instance it was attributed to the inscription on the head of the barrel having been covered with whitewash.

In procuring medical stores, we should likewise take into consideration the climate wherein a vessel will have to cruise or remain longest. Accordingly, if the climate is to be a cold one, we ought to lay in a full supply of all articles adapted to the treatment of rheumatism, pneumonia and other affections caused by cold. If the climate is to be a hot one, we should get an extra supply of mercurials, opium, saline compounds, acids and other remedies suited for miasmatic fevers, dysentery, diarrhœa, cholera and affections incidental to warm latitudes. In temperate climates, when we are to have an alternation of heat and cold, as in our own, we must of course obtain a supply of medical stores adapted to both. The same ought to be done in regard to clothing, and seamen of every class should be provided with such as may enable them to be well protected in any change of weather. From a want of information concerning the dampness and chilliness of that on the coast of California, it must have happened that a large amount of summer clothing was sent to our squadron there, instead of winter clothes, and occasioned great discomfort to the seamen during my stay on that station. For hot weather linen is most comfortable, but cotton is preferable, from its medium quality between the former and woolen goods, as well as for the much greater quantity to be bought for the same money. Cotton, also, does not, like linen, allow perspiration to be suddenly checked, nor does cotton so absorb perspiration and remain sodden with water. Hence muslin sheets are infinitely superior to linen for sea use. For overcoats, in frigid regions, woollen cloth is indispensable, but in rain, gum-elastic and oiled are preferable, from their lightness

and superior impermeability. In sultry latitudes, the last named is to be preferred to the second, from its being both waterproof and not adhering together so closely when one part touches another, that it becomes inseparable or cannot be drawn asunder without being torn and spoiled. A vast amount of gum elastic cloth is thus ruined. From its neatness and flexibility, however, it is an excellent article for mattress covers, counterpanes, capes, coats, cloaks and pantaloons in damp and mild climates, and may be very useful in the most sultry, when care is taken to keep apart the different folds and to prevent any portion of the side on which the gum is spread from touching any other, when the articles are laid by and not in use. Considering how much these waterproof clothes contribute to comfort and health, it is wonderful that they have not yet come into general use for sailors, and that none are provided by Government for them. They make much less use of gum-elastic shoes, which are so much worn on land, and so indispensable in keeping the feet dry. When gum-elastic overshoes cannot be got for this purpose, an excellent substitute will be found by wiping off all dirt and blacking from shoes or boots, and then several times smearing them with a composition of gum-elastic clipped to pieces, softened with pure spirits of turpentine and dissolved by boiling in whale oil or some other animal one. For the soles, several coats of copal varnish will answer the same purpose; and this is to be preferred, from its giving them greater firmness and durability.

Besides the ordinary articles of the materia medica to cure disease, we have to get a supply of others to prevent it, or those termed disinfecters. The most commonly used, and one of the most efficacious is chloride of lime, but it is objectionable from its great bulk and weight proportioned to the amount of chlorine it contains, and from its deliquescing when exposed to moisture. The other chlorides, as those of zinc and lead, are therefore preferable; but for instantaneous disengagement of chlorine I prefer the mixture of table salt, sulphuric acid and black oxide of manganese in due proportion—that is, having three parts of this to four of the first article and four of the second one, diluted in four parts of water. Sulphuric acid, also, poured on nitre, disengages a large amount of disinfecting gas or nitrous acid fumes, and constitutes the famous one of Dr. James Carmichael Smith,

of Dublin. The proportion is a half fluid ounce of the acid to two drachms of the salt. The burning of sulphur and nitre together, the fumes of gunpowder, tar, tobacco and vinegar, and white washing with slacked lime or chloride of lime, may likewise be useful; and we may employ Labarraque's solution of chlorinated soda, which is certainly good to destroy the fœtor of sores and wounds. We also may use Sir William Burnett's solution of the chloride of zinc, and yet not have a healthy ship if she be not cleaned, particularly in the hold, where such accumulations of noxious substances collect. No disinfecting agent could be got to counteract their deleterious action on a crew, and all the patent air pumps which could be worked by them could never throw out of a ship thus loaded with filth all the poisonous gases generated in her during a long sojourn in a hot climate. Nor when small pox or any other truly contagious disease is prevalent on board, can we trust exclusively to any such means for disinfecting the air in a vessel, and rendering it innocuous, as well as inoffensive to our senses.

Experimental Researches applied to Physiology and Pathology.

By E. Brown-Séquard, M. D., of Paris.

(Concluded.)

XXXI.—THE AUDITIVE NERVE IS A NERVOUS CENTRE.

In an anatomical point of view there is no doubt that the auditive nerve is a nervous centre. This is proved by the fact that cells of gray matter are found, not only in the terminal part of the nerve, but also in its trunk, in many animals, according to the researches of Stannius, Corti, Kölliker, and myself.

In a physiological point of view, the fact I have discovered, (see Art. V. p. 21,) viz., that any injury to the acoustic nerve produces turning, is sufficient to prove that it is a nervous centre.

The degree of pain produced by an excitation of this nervous centre appears to be as considerable as that caused by a similar excitation of the trigeminal nerve. I will publish soon an account of the strange effects produced in different parts of the body in consequence of an injury of that nervous centre. I will merely say here that, after such an injury, there are muscles which

appear to be slightly paralyzed. Besides, there seems to be a notable hyperæsthesia of the skin everywhere.

Flourens has found that a section of the semi-circular canals in birds and some mammals produces a peculiar disorder in the movements of the head, and, in some cases, turning. He says that the auditive nerve must be considered as composed of two nerves: one going to the semi-circular canals and possessing a peculiar power on the movements of the body, and the other, the vestibular or true auditory nerve. What I have found on frogs is in opposition to these views. A section of the semi-circular canals, in these amphibia, does not produce any effect on the movements of the body, and the slightest excitation of the true auditive nerve is sufficient to produce pain, hyperæsthesia, turning, and other strange effects on many muscles of the body.

I have somctimes seen turning produced after the mere laying bare of the kind of bladder, containing the terminal part of the auditive nerve, in frogs. So slight may be the excitations on that nerve sufficient to produce turning, that very likely turning after the laying bare of that bladder was the result of some slight mechanical injury of the nerve. The rapidity of turning and the smallness of the circle then described are in proportion to the degree of injury to the nerve. When the two auditive nerves are injured, the animal turns on the side most injured. Sometimes, instead of turning, the animals roll around the longitudinal axis of their body; this takes place in very strong animals after the terminal part of the nerve has been entirely crushed.

In frogs deprived of their cerebral lobes, the same effects are produced after injuries of the auditive nerve, as in unmutilated frogs.

XXXII.—ON APPARENTLY SPONTANEOUS ACTIONS OF THE CONTRACTILE TISSUES OF THE ANIMAL BODY.

All the contractile tissues of the animal body (the muscles of the trunk and limbs, the muscular layers of the digestive canal, the iris, the uterus, the dartos, the cellular tissue, etc.) present, sometimes, apparently spontaneous contractions. I give this name to contractions which are not the result of an external

excitation or of an excitation produced by the nervous system on the contractile tissues. These contractions may be permanent or momentary, rhythmical or irregular, slight or very powerful. One of their causes, if not their only cause, appears to be an excitation directly produced on the contractile fibres by the carbonic acid existing in the blood.

1. *Contractions in the muscles of the face after a section of the facial nerve.*—My friend Dr. Martin-Magron and myself have discovered that after the section of one of the facial nerves, on a rabbit, the face becomes very quickly deviated, not on the healthy side, as it is known to be in man, but, strange to say, on the paralysed side. The deviation, very slight at first, increases gradually during one or two weeks, and then it is so considerable that the middle of the lips is at a distance of four, five or six lines from its natural situation. There is an evident state of contraction in all the paralysed muscles. When the animal is excited, or when its respiration is somewhat disturbed or prevented, the paralytic muscles tremble, and sometimes they have rhythmical contractions and relaxations.

The contractions of these muscles may be so considerable that the bones themselves, and, secondarily, the teeth, may be deformed. In one case, on a rabbit which I had kept living twenty-one months after the extirpation of one of the facial nerves, not only the superior and inferior jaws were by far less developed on the paralysed side than on the other, but the anterior part of the superior maxillary bone was deviated towards the paralysed side, so that the middle line of the roof of the mouth was curved and presented a great concavity on the paralysed side and a corresponding convexity on the other.

When the two facial nerves have been divided, there is no deviation, but there is an evident state of contraction in all the paralysed muscles, particularly around the lips.*

When one of the facial nerves is divided on a dog, on a cat, or on a guinea pig, there is generally no deviation on either side. But very frequently there are convulsive movements, and sometimes rhythmical contractions, in the para-

* Dr. Martin-Magron and myself have found that death occurs from inanition in all the species of mammals on which we have divided the two facial nerves. After the operation they cannot swallow: we do not know why.

lyzed side of the face. One of these two kinds of movements always exists in young cats. They are increased, or produced when they do not exist, in dogs and guinea-pigs, almost every time we prevent the animal from breathing freely. Once, on a very vigorous guinea pig, upon which one of the facial nerves had been torn away, I saw alternate contractions and relaxations taking place, without a relapse, for eight or ten days after the operation in the paralysed muscles. After that time, these tremblings appeared only when the circulation and the respiration were rendered very active, or when the respiration was prevented or diminished. In the case of an impaired respiration, the strength and frequency of these movements were in proportion to the degree of asphyxia. During many months, the same phenomena existed in this animal.

I ought to say that in all the experiments above related, the nerve could not have any share in the movements, because, the fifth day after the division, or after the extirpation of a portion of it, the peripheric part had entirely lost its vital property.

In man, as Dugès justly remarks, as long as there is no attempt at movement, voluntary or emotional, the face remains without any deviation, in cases of facial hemiplegia, which have not lasted a long time.

2. *On spontaneous rhythmical or irregular contractions in muscles of animal life, after death.*—It is a very important fact in connection with the theory of the action of the heart, as I will try to prove hereafter, that other muscles, and particularly muscles of animal life, are capable of having rhythmical movements. This fact I have discovered in the following cases:

a. After the division of the nerves of the ischiatic and lumbar plexuses, on one side, in mammals, if we suddenly asphyxiate the animal, we see, at first, convulsive movements in the three limbs and in other parts of the body not paralysed. After one, two or three minutes, these movements cease, and there are only some tremblings in the muscles of these parts. The paralysed limb has no movement at all during one or two minutes, after which time, suddenly, contractions in many bundles of muscular fibres partially take place. In the same bundle the contractions sometimes appear to come regularly one after the other. In

some cases I have seen, besides these tremblings, movements of the entire limb, consisting of some successive flexions and extensions of the limb, and after these movements had ceased, contractions limited to various bundles of fibres appeared. In these cases the action of the muscles began very late after death, and once, only six minutes after the beginning of asphyxia, which lasted two minutes and a half.

b. Nearly the same movements of which I have spoken as existing frequently in the face, during life, in rabbits and guinea-pigs, after the section of the facial nerves, exist always, either during agony or a little after death. They are generally produced by partial contractions and relaxations of the different bundles of fibres of the various muscles. It is rare to see all the bundles composing one muscle contracting together. These phenomena last five, six or eight minutes after the last respiration. There are also such movements in the face during agony and after death, when the nerves have not been cut and when there is no paralysis; but then the movements appear later and do not last so long as in paralysed muscles.

c. I have seen in many rabbits apparently spontaneous rhythmical contractions in the respiratory muscles. In about ten rabbits, out of forty or fifty, the following phenomena were very decided; on the others they were slight, and sometimes very slight, but in all cases a part of them always existed. I open the abdominal cavity and expose the bowels to the action of a cold atmosphere, so as to lower the temperature of the animal; after some minutes I make a little opening in one side of the chest, and, at last, after a few minutes more, I open largely one side of the chest. Generally, in such circumstances, the respiratory movements continue to take place with energy. I then take away the sternum and divide the two diaphragmatic nerves. The movement of the diaphragm, nevertheless, continues, and it exists rhythmically together with the movements of the other respiratory muscles. Six, eight or ten minutes afterwards the movements of the diaphragm are still regular, (there are from five to twenty contractions in a minute;) the intercostal muscles present then only partial contractions. The different bundles of fibres of these muscles contract separately one after the other, but the same bundle has generally regular contractions and re-

laxations. At that time I destroy the spinal cord, and see that the movements of the diaphragm and of the intercostal muscles are not changed after this operation; they last for nearly a quarter of an hour, and in some cases much longer; their regularity subsists. In the diaphragm, long after the general movement has stopped, there are regular or irregular contractions of many bundles of fibres for one, two, three hours, and sometimes more.

3. *Deviation of limbs produced by a contraction of paralysed muscles.*—In pigeons, after the destruction of all the lumbar part of the spinal cord, the two posterior limbs are completely paralysed. The muscles then are soft, and the different parts of the limbs do not resist at all, when we try to put them in flexion or in extension. But after a few days the paralysed muscles become harder, and after a few weeks there is an evident state of contraction in them. The limb is generally kept in a state of extension, and deviated on one side or the other. The deviation becomes considerable after some months.

Very likely it is owing to the same cause that club-foot and other deviations are produced in embryos, after a destruction or an absence of development of the spinal cord.

4. *Rhythmical movements in the eye of the Ink-fish.* (Loligo sepia, L.)—The ciliary muscle so well described by Dr. W. Clay Wallace, of New York, in the eyes of superior animals, is strongly developed in the ink-fish. After an eye of this mollusc has been separated from the body, I have sometimes found very singular and perfectly rhythmical movements produced by the ciliary muscle. These movements consisted in alternative contractions and relaxations of some parts of that muscle. At every contraction a notable depression was produced in one portion of a zone corresponding to the circumference of the cornea.* In one case I have found four times in fifteen minutes the same rhythm existing in one part of the ciliary muscle. At each of these four examinations I have found sixteen contractions in one minute.

5. *Spontaneous Contractions of the Uterus.*—I have seen hundreds of times the uterus or its cornua, full or empty, contracting to appearance spontaneously, after the death of rabbits and other animals, at a time when the spinal cord had entirely lost,

* The eyes had not been opened.

not only its reflex power, but also the power of acting on muscles when directly excited by galvanism, by warmth or mechanically.*

I have also seen movements taking place in the uterus and in its cornua, in recently dead animals, the spinal cord of which I had destroyed in all its length. The same movements I have found after I had taken out from the abdomen of a living animal the whole uterine apparatus. I have found sometimes that after I had put a ligature around the trachea of guinea pigs, which were at the end of gestation, parturition took place and was produced by three causes: 1st, a direct excitation of the spinal cord by the venous blood; 2d, a direct excitation of the uterus by that blood; 3d, a reflex action of the spinal cord. In two cases I have seen delivery taking place after the action of one only of these three cases, namely, the direct influence of black blood on the uterus of the Guinea pigs, the spinal cord of which I had destroyed from the sixth costal vertebra to the sacrum. The more complete and sudden is the asphyxia, in a rabbit or a Guinea pig, during labor, the more certain will the delivery take place.

Dr. Tyler Smith speaks of a peristaltic action of the uterus, which may expel the child when the mother has died during labor, undelivered. He has not attempted at all to explain that con-

*Dr. Tyler Smith, in his very original book on Parturition, (London, 1849, p. 40,) says that "a slow reflex action of the uterus may possibly continue long after the rhythmic respiratory actions have ceased; as long, indeed, as the body retains its warmth." There is a great error in these lines, about the relation between the warmth of the body and reflex action. We may observe reflex actions even in animals that have lost 10, 12 or 15° Cents., (18, 22 or 27° Fahr.,) of their temperature, and, in certain circumstances, these actions may be, then, more powerful than if the temperature of the body was normal. For instance, if we decapitate an animal after having put a ligature around the carotid and vertebral arteries, we find, when pulmonary insufflation is made carefully, that two important phenomena take place—one is a gradual rapid loss of temperature, if the atmosphere is cold, (this is the well known fact discovered by Sir B. Brodie,) and the other is a gradual and considerable increase of the reflex faculty. It has been in such cases that I have found the greatest degrees of reflex power in mammals. The nervous power accumulates to such an extent in the spinal cord, that if we pinch the skin in any part of the body, but more particularly on the chest and on the anterior limbs, a reflex respiratory movement takes place.

traction, *i. e.* to find out its cause and the circumstances which favor or are opposed to its existence; besides, he has not demonstrated that the peristaltic contraction is entirely independent of the nervous system.

6. *Spontaneous rhythmical movements in the crop and œsophagus of pigeons and other birds.*—I have found that if the crop of a bird, and more particularly of a pigeon, is opened during digestion, some rhythmical movements are frequently seen in it and in the œsophagus. Ordinarily these movements are perfectly regular. They begin in the upper part of the crop, and are propagated from there to the œsophagus. If the animal is asphyxiated, these contractions become very energetic. Their ordinary number, in a minute, varies from ten to twenty.

I have ascertained that these rhythmical movements take place as well in a crop and œsophagus separated from the animal, as in these same parts left *in situ*. Therefore, the nervous centres are not the source from which originates the excitation which acts on the muscular fibres to put them in contraction.

7. *Spontaneous movements in limbs of persons who have died of cholera.*—It is known that after death by cholera, the whole body, and more particularly the limbs, have sometimes very considerable movements. In some cases I have seen alternative movements of flexion and extension of the arms or of the legs, even three hours after the cessation of the beatings of the heart. Physicians who know how quickly after death the nervous system loses its vital powers, will admit easily that these movements cannot be the result of an action of that system. I have ascertained on more than sixty bodies of men who died of cholera, or of various other diseases, that a short time before, or a very short time after the cessation of the beatings of the heart, no reflex action was produced by the tickling of the sole of the foot. The greatest duration of reflex action that I have observed after death has been in a case of cerebral apoplexy. It has lasted thirteen minutes after the last breathing, and about eight minutes after the last beating of the heart. Dr. Bennet Dowler has recorded many curious facts (observed in cases of death from yellow-fever, cholera, etc.,) from which he concludes also that the movements taking place in the limbs are not reflex actions.

I have found that, in general, the more sudden and complete

has been the asphyxia before death, by cholera, the more the limbs are moved after death. I have found also that it is in patients who have died during the algid period that these movements are ordinarily found.

These facts, as I will show hereafter, appear to prove that these movements, like the other movements, of which I have previously spoken, are excited by carbonic acid alone, or together with the poison of cholera.

8. *Spontaneous contractions of the bowels, the bladder, the iris and other parts of the body.*—It is known that frequently at the time of death, many of the contractile tissues of the body are put into contraction. I can go farther and say that it is so with *all* the contractile tissues; and that, contrary to the general opinion, a nervous action is not necessary for these contractions.

There are contractions in all the following organs or tissues during agony and after death: 1, the muscles of animal life; 2, the sphincter of the anus; 3, the respiratory muscles; 4, the iris; 5, the digestive canal (in all its length); 6, the urinary bladder; 7, the uterus; 8, the scrotum, (dartos); 9, the gall-bladder; 10, the ureters; 11, the seminal vesicles; 12, the bronchial tubes; 13, the skin; 14, the blood-vessels; 15, the lymphatics; 16, the cilia.

As to the skin, in many cases the so-called *goose-flesh* (cutis anserina) takes place a little before or little after death, although the body has not yet become cold. I have seen it very strongly marked on the inferior limbs of a paraplegic who died of a softening of the dorso-lumbar part of the spinal cord. It results from this fact that the cellular tissue is able to contract from the same cause which produces contractions at the time of death, in muscular tissues—that is, very likely, carbonic acid.*

* Kolliker has recently discovered fibro-muscular cells—that is, muscular fibres of organic life—in the skin, and he maintains that the *cutis anserina* is produced by these fibres, and not by the cellular fibres. I have published facts which, I think, prove conclusively that the contractions in the skin are in a great measure performed by the cellular tissue. (See Comptes Rendus de la Soc. de Biologie, 1849, t. i. pp. 134 et 157, et 1850, t. ii. p. 132.) Since that time, I have found that in some cartilaginous fishes, in which the iris does not contain any muscular fibre, and is composed of cellular tissue, this membrane may be the seat of considerable contractions; so that I consider it as perfectly certain that the cellular tissue (at least in some organs) is contractile.

Besides, I have found contractions of the cellular tissue of the skin of the face, in animals killed by asphyxia, and on which the facial nerve had been divided for many days or weeks.

In the same man who had a paraplegia, and of whom I have just spoken, I saw very strong contractions in the dartos, during agony.

In animals suddenly asphyxiated, after the destruction of the dorso-lumbar part of the spinal cord, the seminal vesicles sometimes contract, and a slow ejaculation takes place, although there is no erection.

In the sphincter of the anus, when it is paralysed, there are only slight contractions, but they are evident.

The urinary bladder, during agony or after death, sometimes contracts so much, even when it is paralysed, that all the urine it contains is expelled.

The ureters present very strong contractions, in animals recently killed by asphyxia, and these contractions in some cases are rhythmical. The same movements are seen when all the urinary apparatus is *in situ*, and when it has been removed from the abdomen, and therefore separated from the nervous centres. The contraction begins at the kidney and thence is very quickly propagated all along the ureters to their termination in the bladder. Among the contractile tissues, that of the ureters is one of the most irritable.

Bidder and Schmidt, of Dorpat, have recently found that after the division of the two pneumogastric nerves, there is more carbonic acid expelled by the lungs than usual. This fact is very important, because if the theory, which I am about to propose, be true, we ought to see a contraction produced in the bronchial tubes, in consequence of the unusual amount of carbonic acid that they contain. Now, such a contraction certainly exists then, and it is it which causes the well-known difficulty in the expansion of the chest, which exists in that case.

In the eyes, even when they are paralysed by the section of the three nerves of the iris, (the third pair, the sympathetic, in the neck, and the ophthalmic nerve,) the pupil may, at first, contract and afterwards dilate very much.

The lymphatics and the thoracic duct contract very much after death. I have, sometimes, in cases where these vessels were

dilated by chyle, introduced a glass tube, two lines in diameter, into the thoracic duct, and I have seen the liquid ascend into the tube, and in one case run out, although the tube was five inches high.

The cilia are known to have movements independent of the nervous system.

The gall-bladder contracts little and slowly, but evidently, after death, even when it has been, with the liver, removed from the abdomen and separated from the nervous centres.

The choledoch duct and the pancreatic duct, as my friend Cl. Bernard has discovered, have rhythmical contractions during life, in birds. I have found these movements perfectly regular after I had removed all the viscera from the abdomen. Therefore the cause of these rhythmical contractions is not in the nervous centres.

The bowels have considerable contractions during agony and after death; and I will prove hereafter that the cause of these movements is not the influence of cold, or that of air, when they are exposed to the atmosphere. Nurses, in France, are in the habit of judging that death has positively taken place, when, after the cessation of breathing, they see urine and fæcal matters expelled. This expulsion depends upon the contractions then taking place in the bladder and in the bowels.

9. *Causes of the apparently spontaneous contractions during life and after death.*—All the contractions of which I have spoken, appear to me to be produced by an excitation made upon the contractile tissues by a substance existing in the blood, and the quantity of which becomes much increased during asphyxia. The relations between these contractions and asphyxia are evident. A great many of them do not exist unless asphyxia exists, and their energy is always in proportion to the degree of asphyxia.

I believe that the substance in the blood which has that power is the carbonic acid. In admitting this opinion we can easily explain all the phenomena.

There are certain contractions which take place in muscles of animal life, after death, and which have quite another cause. In the cold seasons, it is not uncommon to find, in limbs of frogs, when we separate them from the body, apparently spontaneous

contractions, lasting sometimes for half an hour or even more; but these contractions have begun when we have cut the nerves, and they continue on account of galvanic discharges which accompany them. The fact that they begin after the excitation of a nerve, is sufficient to show that they are not like the other contractions, of which I have previously spoken.

Some of the facts I have related may appear to be distinct from the others. So, for instance, contraction taking place in paralysed muscles of the face or of the limbs in living animals, might be considered as quite different from the contractions existing after death. I think that they originate from the same cause, viz., an excitation by carbonic acid. A muscle may be moved or not be moved by an excitant. If the degree of irritability is greater in one case than in another, we may see the same amount of excitation produce a movement in the first case, and not in the second. If the amount of excitation increases, then we may see both muscles moved, but the most irritable more than the other. This is sufficient to explain why the paralysed muscles may be moved by the carbonic acid existing in the blood during life, while the muscles that are not paralysed are not moved. I have found that the degree of irritability increases, during a certain time after paralysis, in the muscles of animal life. Their irritability being augmented, they are excited sufficiently to contract, by a quantity of carbonic acid which is not sufficient to act on the other muscles.

The following facts and reasonings will, I believe, prove that, at least in the bowels, black blood, very likely by its carbonic acid, may excite powerful movements. It is known that when we open the abdomen of an animal immediately, or a short time, after death, we generally see considerable movements in the bowels. These movements have been attributed to the action of air, or to that of cold, on the bowels. This is not a right view. A sudden exposure to a cold atmosphere may, possibly, produce contractions in the bowels; but certainly cold is not the ordinary cause of these movements. At first, they may exist in a warm atmosphere, and then they appear to be more rapid than in a cold atmosphere. Besides, the bowels may be exposed to a cold atmosphere, and remain motionless, although they have their entire irritability. As to atmospheric air, it is not able to excite a

movement in the bowels. If we open the abdomen of a living animal, in avoiding to excite mechanically the bowels, and in allowing the animal to breathe freely, we may for a long time see no other movement in the bowels, except, sometimes, slight regular and natural peristaltic motions, depending on digestion, and limited to some small parts of the bowels. The animal must be kept on his back, and we must avoid touching the bowels, because a slight contact is sufficient to produce movement. Now, if we prevent the animal from breathing, we see, after ten, fifteen, or twenty seconds, very violent, sudden, and rapid contractions taking place in all parts of the intestine, from the stomach to the rectum, but much more in the small intestine than elsewhere. These movements are quite different from the digestive peristaltic movements. If the animal is allowed to breathe again, and freely, the movements diminish gradually, and disappear almost entirely after a few minutes. Then, if we prevent it again to breathe, we see the movements produced again. This experiment may be repeated many times, with the same result, on the same animal.

We are certainly entitled to conclude that there is an exciting cause of contractions, developed during asphyxia, and that it is neither the cold nor the atmospheric air which produces in all cases the movements of the bowels after the opening of the abdomen. We may draw the same conclusions from another experiment. If we put a tie around the trachea of a living animal, immediately after expiration, we may see and feel violent movements taking place in the bowels, although the abdomen is not opened. It is in consequence of such movements that there is an expulsion of fæcal matters, after death, in man. The urine may be also expelled in these cases, in man and in animals, and this expulsion takes place because the bladder contracts, and not, as it is generally admitted, because the *sphincter vesicæ* becomes relaxed.

Some physiologists have considered the cessation of the circulation of the blood in the bowels as the cause of their movements, after death, and they relate as a proof the fact that the section of one of the arteries going to a part of the intestines, is followed by contractions in the parts thus deprived of circulation. But nothing is explained by saying that the cause of the contraction is

in the absence of circulation. As contractions require an excitation to be produced, what is the exciting cause when the blood does not circulate? After the section of an artery there is blood remaining in the capillaries, and that blood, after a short time, becomes very rich in carbonic acid, and then, if my theory is right, contractions ought to be produced. The result of the section of one of the arteries is, therefore, in accordance with my theory.

Other facts may be adduced proving the influence of black blood and carbonic acid on the bowels.

If black blood is injected in the arteries of the small intestine when its irritability is much diminished, movements are almost immediately produced, but they do not last long. On the contrary, if red blood is injected, movements do not appear immediately, and they are very strong and last long. This action of red blood may be easily understood: it increases the irritability of the muscular layer of the bowels, as it does for that of the muscles of animal life, and when it has been changed into black blood, it excites the muscular tissue and produces contraction. The strength and the long duration of the contraction in this case depend on the increase of irritability. When, as in the above experiment, black blood (containing a great quantity of carbonic acid, on account of the constant formation of that gas in blood deprived of the contact of atmospheric air) is injected, the irritability is not sensibly increased, but the excitation is considerable and there is an almost immediate effect.

If air is injected in the arteries of the bowels, soon after the death of the animal, a part of the blood it contains is expelled, and we find that the movements do not last as long as if the blood had not been removed.

When an animal is killed by hæmorrhage, the intestine, as well as all the other organs, contains more blood than usual, and then its movements are not so strong, and last less than they do generally.

When in a recently asphyxiated animal the arteries and veins of a part of the bowels are divided, the movements of that part become less strong and last less than those of the other parts of the intestine.

When the bowels of a recently asphyxiated animal are put under a receiver containing carbonic acid, their movements are

very much increased, but they do not last so long as when they are in the atmosphere.

When they are put under a receiver containing hydrogen, their movements are very quickly diminished in strength, and they last still less than when exposed to carbonic acid.

When they are put in oxygen, their movements diminish a little at first and soon after become stronger, and they last much longer than usual.

As a general conclusion about the apparently spontaneous contractions which I have described as taking place in paralyzed muscles during life or after death, I will say that it seems that black blood by its carbonic acid is the cause of these contractions. When the nervous centres are still united with the contractile tissues, we see, during agony or after death, stronger movements generally than when they are separated. The action of black blood on the nervous centres may be very great. I have found that the spinal cord, when separated from the encephalon, may be strongly excited by black blood. If an animal is asphyxiated after a transversal and complete division of its spinal marrow in the dorsal region, we see convulsions taking place in the posterior limbs, and they are nearly as strong as when the nervous centers have not been injured. The excitation on the spinal marrow is considerable enough to produce an erection of the penis.*

XXXIV.—ON THE CAUSE OF THE BEATINGS OF THE HEART.

The cause of the rhythmical movements of the heart has been heretofore unknown. I believe I have discovered it.

Before exposing my theory and the facts upon which it is grounded, I will show that the theories put forward until now are not correct.

There are three theories only which are worthy of examina-

* Almost all, if not all, the secretions of the body are increased during asphyxia: bile, (as shown by Professor Bouisson,) saliva, tears, gastric, pancreatic and intestinal juices, and also liver-sugar, etc., are produced in greater quantity then than usual. I believe that this increase results from the excitation of the nervous system, and, in some measure, perhaps, from a direct action of black blood on the capillaries of the glands. The urinary secretion may also be changed in asphyxia, and not only then the urine may contain sugar, as Alvaro Reynoso has found, but also albumen.

tion: 1st, that of Haller; 2d, that of Carpenter; 3d, that of Budge, Schiff, and others.

Haller has been very near the truth in admitting that the beatings of the heart were excited by the blood. His error has been an *error loci.* He thought that the blood acted in the cavities of the heart. It is not so; and it is known that the heart may continue to beat after all the blood has been drawn out of its cavities.

The doctrine of Carpenter* is a very simple and remarkable one. He believes that the muscular fibres may act without having been excited. A muscle, says he, may be compared to the electric jar, and become so *charged* with *motility*, (or motor force,) as to execute spontaneous contractions; and elsewhere, "It is not very difficult to conceive that the ordinary rhythmical movements of the heart may be due to a simple excess of this motility, which is continually being supplied by the nutritive operations, and is as constantly discharging itself in contractile action." Carpenter believes that the reason for which the heart presents spontaneous contractions while the other muscles do not, (at least ordinarily,) is, that there is a higher degree of motility in the heart. He considers as very important the facts I have discovered, that many other muscles besides the heart may present rhythmical movements. He thinks that these facts show there is a tendency to rhythmical movements in the muscles themselves, altogether independent of the excitement to action which they receive through the nervous system.

The best ground for the hypothesis of Carpenter is that, according to him, the heart continues to beat, although it is not exposed to any excitation in certain circumstances. He says: "When every source of excitement is excluded, we cannot but perceive that these actions take place with a *spontaniety* which can scarcely be accounted for in any other way than by considering them as expressions of the vital activity of the component cells of these forms of muscular tissue, which manifests itself in this mode, when the developmental life of the cell has attained its maturity. And this view is strikingly confirmed by what we know of the origin and termination of these movements.

* See his *Principles of Human Physiology, American edition,* by F. G. Smith. Philadelphia, 1853. pp. 130 to 132, 319, 325, and 471–72.

For the action of the heart commences when, as yet, its contractile parietes consist but of an assemblage of ordinary-looking cells, no proper muscular tissue being evolved, and no nervous system being yet developed, from which the stimulus to the movement can proceed; and *it is impossible to assign any other cause for the movement under such circumstances*, than the attributes inherent in the tissues which perform it."

The first thing to be said against the view of Carpenter is, that his hypothesis is not necessary; because *it is possible to assign another cause for the movement of the heart under the circumstances* he speaks of. This will be proved hereafter.

The doctrine of Carpenter implies, that the degree of irritability (motility, motor force, contractility,—never mind the name) is greater in the heart than in the other muscles which have no spontaneous action. This is not the case. The degree of irritability, as judged by its duration after death, is generally greater in the muscle of animal life, than in the heart. The accepted sentence of Haller, *Cor ultimum moriens*, generally, is not true.

If Carpenter was right, we should see, during life, the apparently spontaneous contractions which take place in all the contractile tissues after death; because their irritability is at a higher degree in the first, than in the second case. Besides, we should not see oxygen, or red blood, diminish the frequency of the beatings of the heart; and black blood, or carbonic acid, increase that frequency.

An experiment, consisting in the research of the influence of *vacuo* on the heart, has been made by Tiedemann and by Dr. S. W. Mitchell, and Dr. T. H. Bache, (see Dunglison's Physiol., vol. ii. p. 150.) It seems to me that the result of this experiment is in complete opposition to the doctrine of Carpenter. These experimenters have found that the beatings of a heart were speedily brought to a stand by the exhaustion of the air, and that they were renewed when it was re-admitted. If the view of the eminent British physiologist was right, we ought to see the heart continue to beat in vacuo about the same length of time as it would in hydrogen or nitrogen, because its irritability cannot be suddenly diminished enough by the exhaustion of the air. In these gases the heart of a mammal may beat for five or

ten minutes or more, and the right auricle may beat for hours; and the heart of a frog may beat for one day. It is much more to account for the stopping of the heart's action in admitting that the excitant of that action is removed during the exhaustion of the air. John Reid had found that the heart of a frog had continued to beat *in vacuo*, but how long he does not say.*

I will relate hereafter many experiments of mine which are in opposition to the theory of Carpenter.

It is one of the most important questions in physiology, whether the nervous centres, the nerves, and the contractile tissues are able to act without stimulation. This question has not been yet entirely treated by any physiologist. I propose publishing a special paper on the subject. I will merely say here that there may be apparently spontaneous actions in the spinal cord, as well as in the muscles. For instance, very frequently, in a frog, after the removal of the brain and the medulla oblongata, we may see strong movements apparently spontaneous, but when we know that the slightest excitation of the skin, or of any other very sensitive part, may excite the spinal cord, and produce a reflex action, we are authorised to consider all the movements taking place as reflex actions. An excitation may have come to the spinal marrow from the bladder, from the bowels, from the lungs, (in which worms are almost always found in the cold seasons, i. e. at the time these phenomena are generally observed,) etc.

As to the spontaneity of action in muscles, I have tried to prove in a preceding article that it is a mere and false appearance.† I will prove hereafter that the cause of the apparently

* Art. Heart, in Todd's Cyclop., vol. ii. p. 611. J. Reid says in the same page, "We ought to be more cautious in admitting the existence of this innate moving power, since it is in opposition to a well known law in the animal economy, that though the various tissues of an organised body are endowed with certain vital properties, yet the application of certain external and internal stimuli is necessary to produce their manifestations of activity. In fact it is from the action and reaction of these tissues and excitants upon each other that the phenomena of life result."

† Carpenter says that the action of the uterus, as it shows itself, "not merely in the final parturient effort, but in local contractions that frequently occur during the latter months of gestation, (simulating the movements of the fœtus,) are more satisfactorily accounted for by considering them as a discharge of accumulated power, than in any other mode." I will try to

spontaneous contractions of the heart, is the same as that of the like contractions in other contractile tissues.

The physiologists who maintain that the beatings of the heart depend on the nervous system, appear to me to be greatly mistaken. They make a confusion between two things, greatly distinct, one from the other: they conclude from the fact that the nervous system is able to act on the heart, that its influence is necessary. It is the same kind of mistake which is so frequently made as to the influence of the nervous system on nutrition, on secretions, and on animal heat; because that system is able to act upon these functions, it is concluded that its influence is necessary.

The first argument to be adduced against the writers who admit, as necessary, the influence of the nervous system on the heart, is, that they change only the ground of the difficulty in doing so. Instead of having to explain why the heart acts rhyth-

prove elsewhere that for the uterus, as well as for any other contractile tisue, there is no spontaneous action. The uterus, in pregnancy, becomes more and more irritable every day, and when its irritability has arrived at a very high degree, then the slight excitation produced by the carbonic acid normally contained in the blood is sufficient to put it in action. When the contractions have begun, they are very much increased by a reflex action. Every contraction is accompanied by a galvanic discharge on the nerves in the neighborhood of the muscular fibres which contract, and the sensitive nerves being thus excited, it results, 1st, that a pain is felt, the degree of which is in proportion to the degree of any contraction, and therefore with the degree of galvanic discharge;* 2d, that the spinal marrow is excited, and produces reflex movements in the uterus. Now, the more these reflex contractions are energetic, the more they are induced to take place again, on account of the galvanic discharge which accompanies them. So that there would be a constant increase in the intensity of the contractions if there were not four limits to them. 1st, there is no galvanic discharge when the muscular fibres *are contracted;* it is only at the time they *are contracting* that this discharge takes place; 2d, the primitive cause of contraction, the excitation of the muscular tissue, by carbonic acid, diminishes much during the contraction, because the caliber of the small blood-vessels is much diminished, and the blood expelled from them; 3d, every contraction of the uterus diminishes the degree of its irritability; 4th, the reflex power of the spinal cord becomes exhausted, or at least diminished.

* See, on this subject, my paper in the Comptes rendus de la Société de Bologne, an. 1850, t. II. p. 172.

mically, they have to explain why the nervous system acts rhythmically on the heart. Not only they have not explained this rhythmic action of the nervous system, but, as far as I know, they appear not to have been aware that this was to be explained.

The second reason I will mention, is the fact, so well established by my friend Professor Lebert, that, in embryos, the heart beats when it is merely composed of cells, and when the nervous system has not yet appeared.

A third reason is, that, either in monsters, or in animals operated on by physiologists, there has been a long persistence of the beatings of the heart when a part of the cerebro-spinal centre did not exist, or had been removed. Any part may be in that case, even the medulla oblongata, as I have discovered. (See Art. xvi. p. 40.)

In opposition to the idea that the beatings of the heart depend on the microscopical ganglia existing in that organ, I will say, that, besides the fact that the heart beats in embryos before the nervous system exists, and besides the improbability that such a small amount of nervous matter should have so great a power, there are two good reasons against this strange theory:—1. There have been found no ganglia, large or microscopical, in the auricles, in the sinuses of the pulmonary veins, or in those veins. All these parts, nevertheless, may continue to beat a long while, (even for hours,) after they have been separated from the ventricles where are the microscopic ganglia. 2. Rhythmical movements may exist in a great many other muscular parts of the body, where there is no microscopical ganglion, and where these parts have ceased to be under the influence of the nervous centres.

The three theories which I have examined being unable to explain the beatings of the heart, I will now expose my theory, and discuss the three following questions:—1. What is the excitant which puts the heart in action? 2. Does that excitant act rhythmically? 3. Does that excitant act together directly on the muscular fibres of the heart, and on the nervous system; or does it act only on the muscular fibres?

After having solved these three questions, I will examine the objections which might be made to the doctrine I propose.

1. *What is the excitant which puts the heart in action?*

I believe that the beatings of the heart are excited by a prin-

ciple existing in the blood, and that carbonic acid is that principle. This view is grounded on the following facts:

a. When we prevent a warm-blooded animal from breathing, the beatings of the heart become more frequent than before, for about one or two minutes. It is not on account of the emotion alone that it is so, because the same effect is produced when we asphyxiate suddenly an animal which has entirely lost his power of having emotions, in consequence of the action of chloroform.

b. Many times I have found, on myself and on one of my friends, that the beatings of the heart are rendered more active during asphyxia. We hold our breath for about three quarters of a minute, and during the last fifteen seconds the heart beats from two to four (in one case five) minutes more than when the respiration was free. We have made the experiment in the sitting position, avoiding any movement of the body in all the cases.

c. John Reid has discovered that when any hemadynamometer is put in the femoral artery of a dog, the mercury rises in the instrument if the animal is asphyxiated, and about one minute after the respiration has been stopped. The same result has been obtained in twenty experiments. It seems to me that this fact proves that the contractions of the heart become more energetic during asphyxia. John Reid attributes the result he has obtained to some difficulty that black blood seems to have in passing through the capillaries of the different parts of the body. I do not deny that there is such a difficulty; but I think that the great reason of the ascension of mercury in the hemadynamometer is, the increase in the force of the heart. A simple experiment proves that I am right. I adapt the hemadynamometer to the aorta in the abdominal cavity, and then I open quickly the chest, and I put a ligature to the brachial and carotid arteries. About three quarters of a minute after opening the chest, and about half a minute after the ligature has been put on the arteries of the head and arms, the mercury rises notably in the instrument; sometimes the elevation is as considerable as two inches. It results from this experiment, that the heart beats more strongly in asphyxia about one minute after its beginning.

d. Woodall, a most intelligent and accurate observer, says Dr. Martin Paine, (see Med. and Physiol. Comment., t. ii. p. 49,)

states, that the best remedy for syncope is to obstruct respiration entirely by momentarily confining the nose and mouth. If this be true, it is in perfect accordance with my view, that, during asphyxia, the normal cause of the beating of the heart increases in the blood.

e. If a frog is put under a receiver containing pure oxygen, at a temperature of 40 or 50° Fahr. (4, 5, or 10 Cent.) after its heart has been laid bare and its central nervous system destroyed, we see the heart beat for a very long time, (one, two, or three days.) On the contrary, if, at the same temperature, another frog, deprived also of the central nervous system, is put in carbonic acid gas, the heart beats very quickly at first, but it soon ceases to beat, (in one or two hours only, sometimes, and for the most about half a day.)

f. All the causes which increase the formation of carbonic acid gas in the body, increases the frequency of beatings of the heart.

g. If we inject the serum of blood into the arteries of the heart, so as to expel as completely as possible the blood contained in the capillaries of this organ, and if then we remove the blood from the cavities of the heart, we find that its beatings are, at once, almost entirely suspended, and that they are completely stopped in a very short time, (from one to eight minutes.) The muscular irritability is not destroyed in this organ; it does not beat because its excitant has been removed.

h. I have found that when the heart of a young animal is put in hydrogen, its beatings hardly change at first, but they stop in a very short time. When it is put in carbonic acid gas, its beatings are, at first, increased in frequency and strength; but they very soon are stopped. When it is put in oxygen, its beatings are slowly increased in frequency and strength, and they last very long.

i. On newly-born cats and dogs, before the occlusion of the *ductus arteriosus*, I open the chest and put a ligature on the arteries going to the head and fore-limbs, and on the aorta immediately after the origin of the ductus arteriosus. Then the blood, expelled from the right ventricle, is sent to the lungs, from which it comes to the left auricle, and afterwards to the left ventricle. From there it is sent into the only part of the aorta remaining accessible, and thence it goes into the cardiac arteries, and into the

pulmonary artery, through the ductus arteriosus, (a direction which is the reverse of the normal direction in that duct.) By the cardiac veins the blood arrives again in the right side of the heart. The circulation from the heart to the lungs, and *vice versa*, continues very well. I have found, that if hydrogen is insufflated into the lungs, the beatings of the heart are not much changed at first, but they go on diminishing, and they disappear in a short time. When an injection is made with carbonic acid, the beatings of the heart are quickly increased in frequency and strength; but they are stopped after a short time. When oxygen is insufflated, the beatings of the heart become slowly more frequent, and they remain quick and strong for a long time. (I have once, by such insufflation of oxygen, maintained beating for eleven hours in the heart of a young cat.)

I believe that these facts prove that black blood, by its carbonic acid, is an excitant of the beatings of the heart. If, now, we adduce to these facts all those I have related in a preceding article, on the apparently spontaneous contractions in all the contractile tissues of the body, we shall have a very considerable number of facts, proving that, during asphyxia, there is an accumulation in the blood of the principle which causes these contractions. I believe that it is almost impossible to deny that this principle is the carbonic acid gas.

Before trying to show that what takes place in asphyxia in the heart is only an exaggeration of what normally exists in that organ, I will treat the two remaining of the three questions I have announced I would endeavor to solve, as regards the excitant of the heart's action.

2. *Why does that excitant act rhythmically?*

I believe it is easy to explain why the agent of excitation of the heart* produces rhythmical contractions. I will suppose, first, that the action is permanent. A part of the heart, ventricles, or auricles, being dilated, receives an excitation in all its fibres simultaneously, and a contraction is produced. But, according to the well-known law of Schwann, the exciting cause which is able to give the impulse when the muscular fibres are long, is not able

* What I will say here for the heart, might be said for all the contractile tissues, presenting apparently spontaneous rhythmical contractions, as the cilia, for instance.

to maintain the contraction when the fibres have been shortened. Then, on account of this insufficiency of power of the cause of the contraction, a dilatation ensues. We may present the fact in other words, and say that the resistance to the contraction originating from the displacement of the constitutive matter of the contractile tissues, increases in proportion to the shortening of the fibres; and that after the fibres have contracted under the impulse of the exciting cause, although this cause continues to act, a dilatation is produced by the force belonging to that resistance, which is nothing but elasticity. If the cause of the contraction of the heart was a considerable one, then we should see a permanent contraction; and it is so when we apply galvanism—the elasticity, then, is not powerful enough to produce dilatation. On the contrary, with a weak exciting cause, like carbonic acid, the result ought to be different. When that cause has more power, as in asphyxia, the shortening of the fibres takes place quicker, and is more considerable; and even then it is not sufficient to maintain contraction, the tendency to dilatation being also increased.

I ought to say, that the excitant cause of the contractions is not always at the same degree of power. The small blood-vessels and the capillaries being compressed during the muscular contractions, there is a diminution of excitation during that time. This should be sufficient to explain the alternate contractions and dilatations. But such a diminution in the caliber ought to be very little, if even it exists in certain organs, (the heart when composed of cells, for instance.)

I come now to the third question about the excitant of the heart—

3. *Does that excitant act together on the muscular fibres and on the nerves of the heart, or does it act only on the muscular fibres?*

I believe it ought to act also on the nerves; but I cannot prove it otherwise than by saying, that all the agents of excitation that we know to act on the muscular fibres, are able to act on the nerves.

There are many things to be said besides the above facts and reasoning, to prove the truth of the doctrine I propose. I will expose some of them.

The following question might be made:

How is it that the heart is the only muscle containing striated fibres, which presents normally rhythmical movements?

The answer to this question appears to be very simple. The intensity of the stimuli, the degree of irritability, and the resistance which a muscle has to overcome when it contracts, are three elements which we ought not to lose sight of when we examine the difference of contractions between two muscles. Suppose the heart possessing the same degree of irritability as another muscle: if the stimulus is the same, and the resistance the same also, for the heart and for the other muscle, there will be the same effects. But if the stimulus is more considerable in the heart than in the other muscle, and if the resistance to be overcome is less for the heart, then with the same degree of irritability in both parts, and even with less irritability in the heart than in the other muscle, we will see a movement in the heart, and not in that other muscle. Now a simple examination of the vessels of the heart, proves that they contain more blood, and consequently more stimulus, than the other striated muscles. Besides, as the heart is not inserted into heavy bones to be moved, it has less resistance to overcome when it has not to circulate the blood, as after death, or when it is out of the chest, than the muscles of animal life. Some muscles in the face and the diaphragm, being almost without an external resistance, when their contractions do not go so far, it results that they are moved much more easily after death, than the muscles of the limbs. In consequence of these views, I believe that, although there is in the blood-vessels of all the muscles of the body a principle which is an exciting cause of contractions, there are no contractions produced, because the quantity of that principle is not sufficient, or because the resistance to contractions in many muscles is greater than in the heart.

I must, in conclusion, say, that I do not advance my theory of the rhythmical movements as perfectly proved. I believe it is true, and that there are a great many facts which appear positively to prove it. What I can assert is, that it is by far much more in harmony with all the known facts, than the other theories.

Mortality of Philadelphia, for April, May and June, 1853, *arranged from the record kept at the Health Office.* By WILSON JEWELL, M. D.

The deaths from all causes reported during the quarter ending July. 2d, embracing a period of 91 days, amount to 2235. Compared with those for the same period of last year, there has been a falling off of 15 per cent. in the aggregate.

Deducting the "Still Born," amounting to 150, the deaths from "External Causes," 82, "Old Age," 29, and "Unknown," 46, amounting in all to 307, and there will remain 1928 deaths from known diseases.

The number of deaths reported under one year of age, exclusive of still-born children, amounts to 482, or nearly one-fourth; and those under five years amount to 915, or about one half of the whole number of deaths from known diseases.

The deaths among males were 1157, females 1078—being an excess of 79 of the former over those of the latter.

Estimating the population at about 415,000, the aggregate of deaths in the quarter will give 1 in every 181½ of the population; which is equivalent to 25 deaths per day, during the quarter.

Eleven hundred and thirty-two, or about fifty per cent. of the whole number of deaths recorded, were under 20 years of age.

CLASS 1st.—Among this class, the "Endemic or Zymotic," there is a decrease of 162, or about 25 per cent. from those for the like period in 1852. The difference is accounted for by the falling off in small-pox and measles. Last year the mortality from these diseases was wide-spread. The present year, thus far, they are comparatively rare.

CLASS 2d.—Of the diseases of "Uncertain Seat," there were 297 deaths. Of these, 212 are charged to Debility, Marasmus and Dropsy, of which number 103 were under one year of age.

CLASS 3d.—The deaths under this head, "Nervous System," amount to 393. 142, or nearly one-third, were from Convulsions, 47 from Dropsy of the Brain, and 40 from Inflammation of the Brain. Of these, 114 were under one year of age.

Class 4th.—The diseases of the "Organs of Respiration," amounting to 515, constitute nearly one-fourth of the whole number of deaths for the quarter.

Consumption of the Lungs make up a large proportion of this class—namely, 312; while Inflammation of the Lungs furnish 103. The deaths from Consumption of the Lungs are less 12 than for the same period in 1852. 92 of the deaths took place between the ages of 20 and 30. The deaths among females exceed those of males by 11 per cent.

Class 8th.—The diseases of the "Organs of Generation" furnish only 22 deaths. Five of these are charged to Child-bed and four to Puerperal Fever. In 1852, in the same period, there were 24 deaths from diseases of the Organs of Generation, eight of which were from Puerperal Fever.

Class 12th.—From "External Causes" there were 82 deaths. 56 of these occurred in males and 26 among females. The exposed situation of the male sex over that of females, and the danger of their out-door employments, may add to the increase of deaths among males from external causes.

Table No. 3, furnishes the exact number of deaths at fifteen distinct periods of life. By this it will be seen that infancy furnishes a large proportion of the deaths; that between birth and the fifth year, 915 children have perished during the past three months—a number almost equal to one-half the whole number at every age of life. The healthiest period of childhood lies between the ages of 10 and 15, and this corresponds with other statistics.

The deaths that took place at the Alms-House during the quarter, were 174, and those which occurred among people of color were 190.

TABLE No. I.

Deaths for the Second Quarter of 1853, *classified.*

	April.	May.	June.	MALE. A.	MALE. M.	MALE. J.	FEMALE. A.	FEMALE. M.	FEMALE. J.	Total.
1. *Endemic and Contagious Diseases.* Zymotic or Epidemic	135	108	218	59	49	112	76	59	106	461
2. *Uncertain or general seat.* Sporadic diseases	94	76	127	55	36	63	39	40	64	297
3. Nervous System	140	104	149	77	52	89	63	52	60	393
4. Organs of Respiration	203	152	160	99	83	78	104	69	82	515
5. " Circulation	24	17	23	12	6	8	12	11	15	64
6. Digestive Organs	54	41	56	31	16	33	23	25	23	151
7. Urinary Organs	1	2	6	1	2	5			1	9
8. Organs of Generation	6	11	5				6	11	5	22
9. " Locomotion	6	5	1	1	2		5	3	1	12
10. Integumentary System	1	2	1	1	1	1		1		4
11. Old Age	14	6	9	6	3	6	8	3	3	29
12. External Causes	19	26	37	11	17	28	8	9	9	82
Still Born	50	33	67	31	21	36	19	12	31	150
Unknown	9	14	23	6	5	15	3	9	8	46
	756	597	882	390	293	474	366	304	408	2235

TABLE No. II.

1. *Endemic and Contagious Diseases.—Zymotic or Epidemic.*

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Cholera Infantum	28	35	53	8	2													63
" Morbus	2	2	2						1			1						4
Croup	25	29	7	8	30	9												54
Diarrhœa	17	12	14	3	1			4	2	1			1		3			29
Dysentery	31	31	18	12	15	1		1	2	2	2	2	5	1	2	1		62
Erysipelas	14	12	10	1	2		1	1	2	2	1	3	2		1			26
Fever	2	4	1						1	1	1	1	1					6
" Bilious		4		1	1			1			1							4
" Continued		3								2		1						3
" Intermittent		3			1					2								3
" Remittent	5	7		3				2	2	3		1		1				12
" Scarlet	37	38	4	13	34	19	4	1										75
" Typhus	26	23				1	1	4	12	12	6	8	2	2	1			49
" Typhoid	19	23			1	5	4	3	6	5	7	7	1	1	1	1		42
Hooping Cough	3	4	2	5														7
Influenza		1		1														1
Measles	3	2	1	1	3													5
Small Pox	7	8	7	1	2	2		1	1	1								15
Syphilis	1									1								1
	220	241	119	57	92	37	10	14	29	33	19	24	12	5	8	2		461

2. *Uncertain or General Seat.—Sporadic Diseases.*

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Abscess	4			1				1	1	1								4
" Neck		1		1														1
" Psoas	1	1										1	1					2
Angina		4	2			2												4
Cancer	2	3					1					4						5
" Breast		1										1						1
Cachexia	1	1			1								1					2
Cyanosis	2	3	5															5
Debility	45	50	40	3	2		1	1	3	9	3	7	11	9	6			95
Disease of Throat	1										1							1
Dropsy	15	11	4		5	2		1	3	1	1	1	4	2	1	1		26
Fungous Glands of Neck	1												1					1
Gangrene		2		1	1													2
Glandular Swelling		1	1															1
Hectic Fever	2								1	1								2
Hemorrhage	3	5	4		2				1				1					8
Inanition	5	3	5		1						1	1						8
Inflammation	3				2						1							3
" Throat		1			1													1
" Tonsils	1			1														1
Malformation	1	3	3	1														4
Marasmus	44	47	59	11	14		2	1		1	3							91
Melœna	1	1	1								1							2
Scirrhus	1											1						1
Scrofula	9	3	6	1	1	1		1		1			1					12
Spina Bifida	1	1	2															2
Tabes Mesenterica	7	1	6	1	1													8
Ulceration	2									1		1						2
" Throat	2			1						1								2
	154	143	138	22	31	5	4	5	9	16	11	17	20	11	7	1		297

3. *Of the Nervous System.*

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Abscess of Brain	1					1												1
Apoplexy	12	11			1			1	1	1	5	4	6	4				23
Cerebral Fever		1			1													1
Compression of Brain	1		1															1
Concussion "	2	1		2						1								3
Congestion "	19	14	11	4	8		1		4	2	1	1		1				33
Convulsions	69	73	80	19	25	3	4	1	1	5	2	1	1					142
" Puerperal		1								1								1
Coup de Soleil	20	4		1		1		3	7	5	5	1			1			24
Cramp	1		1															1
Dropsy of Brain	23	24	23	12	8	3						1						47
Effusion "	6	8	4	1	3	1		1	1			1	2					14
Epilepsy	3	3	1					2	3									6
Neuralgia	1	1							1				1					2
Palsy	6	7							1		2	3	2		5			13
" of Brain	1					1												1
Mania a potu	19	1						1	4	4	6	3	2					20
Softening of Brain	1	1									1				1			2
Tetanus	3		1						1		1							3
Trismus	1	1	1	1														2
Tumors of Brain	1							1										1
Disease "	6	6	2	1	2			1	1	2	3							12
Inflammation "	22	18	11	9	11	4	2		1	1		1						40
	218	175	136	50	60	13	7	11	26	22	26	16	14	5	7			393

4. *Organs of Respiration.*

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Abscess of Lungs	1	3			1		1					2						4
" Thorax		1	1															1
Asthma		3									1		2					3
" Thymic		1					1											1
Consumption of Lungs	147	165	3	4	3	5	9	30	92	74	50	20	16	6				312
Congestion "	4	5	3	3					1				2					9
Disease of Lungs	8	1	3	1		1			3		1							9
Dropsy of Chest	4	6		1	2		2	1		1			1	2				10
Effusion "	2	1			1	2												3
Empyema	1								1									1
Disease of Chest	1					1												1
Effusion of Lungs		1												1				1
Hemorrhage of Lungs		4	1							1	1		1					4
Inflammation "	61	42	16	9	20	5	1	2	14	11	5	7	5	7	1			103
" Larynx	5	1	2		1			1	1	1								6
" Bronchiæ	19	16	13	4	5				2	1	1	3	3	3				35
" Pleura	2	2							3			1						4
" Chest	2	1		2	1													3
Palsy of Lungs	1				1													1
Ulceration of Larynx	1	1		1					1									2
Tuberculosis	1	1					1					1						2
	260	255	42	25	35	14	15	34	118	90	58	34	30	19	1			515

5. *Organs of Circulation.*

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Angina Pectoris		1										1						1
Anæmia	1	1			1						1							2
Dropsy of Heart	3	6	2		1	1	1			1	1		1			1		9
Disease "	17	23	4	4	3	1	2	1	2	6	6	5	2	2	2			40
Enlargem't "	1	5		1				1	1		1	1		1				6
Inflammation "	4	1						1	1		2	1						5
Ossification "		1												1				1
	26	38	6	5	5	2	3	3	4	7	11	8	3	4	2	1		64

6. *Digestive Organs.*

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Abscess of Liver	1	1							1	1								2
Abdominal Dropsy	3	3							2	1		1	1	1				6
Cancer of Stomach	1										1							1
Cancrum Oris	3	2		1	2	1	1											5
Cirrhosis	1	1											2					2
Consumption of Bowels	1	1				1			1									2
Disease of Bowels	1	1			1							1						2
" Liver	2	1	1							1	1							3
" Stomach		2							1	1								2
Dyspepsia	1			1														1
Enlargement of Liver	1								1									1
Gastric Fever	1			1														1
Hernia, Strangulated	1		1															1
Intussusception	1				1													1
Inflammation of Bowels	2	2	2			2												4
" Liver	7	3			2		1	1		2	2	1	1					10
" Stom'h & Bow'ls	32	29	12	12	10	1		3	9	3	5	2	1	1	1	1		61
" Peritoneum	10	13	1		2		2	2	6	5	1	3	1					23
Jaundice	5	2	3		1	1			1				1					7
Obstruction of Bowels	1	1								1			1					2
Perforation of Stomach	1									1								1
Scirrhus of Pancreas		1										1						1
" of Stomach	2								1	1								2
" of Bowels		1										1						1
Teething	2	3	3	2														5
Tumour of Abdomen	1													1				1
Worms		1				1												1
Ulceration of Bowels		2								1			1					2
	81	70	23	17	19	7	4	6	22	18	11	10	9	3	1	1		151

7. The Urinary Organs.

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Albuminaria	1								1									1
Disease of Bladder	1													1				1
Inflam. of Bladder	1	1							1				1					2
" of Kidneys	1				1													1
Ischuria	1								1									1
Rupture of Urethra	1									1								1
Stricture	1												1					1
Urinary Calculi	1												1					1
	8	1			1				3	1			3	1				9

8. Organs of Generation.

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Cancer of Uterus		3								1	1		1					3
Child Bed		5							1	4								5
Disease of Uterus		1											1					1
Fever Puerperal		4							3	1								4
Hemorrhage from Uterus		3							2	1								3
Inflammation of "		3								2	1							3
Puerperal Mania		2							2									2
Scirrhus of Uterus		1											1					1
		32							8	9	2		3					22

9. Organs of Locomotion.

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Caries		2											1		1			2
Caries of Spine	1	1					1	1										2
Congestion Spinal Marrow		1											1					1
Disease of Hip		1				1												1
" of Spine	2	1		1		1	1											3
Inflam. of Knee Joint		1											1					1
" of Spine		1				1												1
Spinal Irritation		1				1												1
	3	9		1		4	2	1					3		1			12

10. *The Integumentary System.*

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Carbuncle		1									1							1
Fistula	1								1									1
Purpura Hemorrhagica	2		1						1									2
	3	1	1						2	1								4

11. *Old Age.*

Old Age	15	14											3	11	14	1		29

12. *From External Causes.*

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Asphyxia	2	2	4															4
Burns and Scalds	3	7		4		1			2	3								10
Casualties	19	10	4		2	2	2	2	3	3	8	1	1	1				29
Drowned	20	1			1	2	2	2	4	2	4	1	2	1				21
Fracture	1								1									1
" of Spine	1											1						1
Intemperance	5	3							3	2	1	1	1					8
Poisoning		2	1					1										2
Suffocation	1									1								1
Suicide	4	1							1	1	2	1						5
	56	26	9	4	3	5	4	5	14	12	15	5	4	2				82

Unknown	26	20	8	3	3	1	1		6	6	5	6	5	2				46
Still Born	88	62	150															150

TABLE NO. 3.

Deaths for the Second Quarter of 1853, *at fifteen distinct periods of life.*

Under 1 year,	482
1 to 2	184
2 to 5	249
5 to 10	88
10 to 15	50
15 to 20	79
20 to 30	241
30 to 40	215
40 to 50	158
50 to 60	120
60 to 70	109
70 to 80	63
80 to 90	41
90 to 100	6
100 to 110	0
	2085
Still Born	150
Total,	2235

Included in the above Tables, are 174 from the Blockley Almshouse, 190 people of color, and 20 from the country; as follows:

	April.	May.	June.	Total.
Almshouse,	65	47	62	174
Blacks,	67	55	68	190
Country,	7	5	8	20
	139	107	138	384

A case of Congenital Occlusion of the Vagina, relieved by operation. By GEO. L. UPSHUR, A. M., M. D.; Surgeon to U. S. Marine Hospital, Norfolk; Member of Am. Med. Association; Fellow of Med. Soc. of Virginia, &c., &c.

The subject of this notice was a negro girl, aged 18, the property of Dr. Southall, of Smithfield. She was admitted into the Norfolk Slave Infirmary, October 8th, 1852.

About eighteen months ago, she commenced to have symptoms characteristic of the approaching catamenia, recurring every four weeks with great regularity, and continuing at each return about four days, but without any discharge from the vagina. A round, well defined tumor had gradually appeared above the pubes, becoming larger after every return of the menstrual symptoms, and giving the appearance, when she entered the Infirmary, of one advanced to the fourth month of pregnancy. Eight months ago she began to suffer from distension, and recently the pressure of the tumor upon the rectum and bladder has given her a great deal of pain. There are, also, evident contractions of the uterus, as if it were making a strong effort to get rid of its contents. These symptoms have been so severe and so continuous for the last two months as to unfit her for work, and oblige her to remain almost constantly in the recumbent position. The patient was well grown, and the mamma and external genitals fully developed, the clitoris and labia being of the ordinary size and shape, and the pubis covered with hair.

She stated that she had repeatedly felt the venereal desire, and four times had attempted to consummate the venereal act, but without success. Upon examination I found that the finger would pass into the vagina only about an inch and a-half, being arrested by a firm, thick septum, perfectly smooth, and offering a complete barrier to further ingress. By pressing upon the tu-

mor when the finger was in the vagina, fluctuation could be easily felt. On introducing one finger into the rectum, and a catheter into the bladder, and inclining the former upward, and the latter downward, the finger came in contact with the catheter just behind the terminus of the vagina, nothing appearing to be between them but the coats of the rectum and bladder. The tumor could also be felt from the rectum, sinking low down into the pelvis, and giving decided fluctuation when gently struck.

The introduction of the speculum showed that the vagina was perfectly formed, *as far as it went.* There was no enlargement at its uterine extremity—no *cul-de-sac* formed. It seemed as if nature had lacked for materials to form an entire vagina, but as far as she progressed she had done her work perfectly.

On the 15th of October I performed the operation, in the presence of Drs. Moore, Rose, Robt. Tunstall, Southall, and H. Nash. The bladder and rectum being first evacuated, the patient was placed upon the table, as in the position for lithotomy, except that the hands were not bandaged to the ankles. Chloroform was then administered, and as soon as she became insensible, I introduced the speculum up to the terminus of the vagina, and distended the parts as far as possible. The instrument was held in position by an assistant who, at the same time, made pressure upon the uterine tumor. A second assistant retained a catheter in the bladder, in such a position that I could easily touch it with the forefinger of the left hand introduced into the rectum. Taking the view that in the space bounded by the rectum and bladder, and the vagina and os tincæ, there was nothing but cellular tissue, I desired to have such guides in the operation as would prevent me from wounding any portion of the pelvic viscera, my object being to make a passage up to the os tincæ directly in a line with what would have been the axis of the vagina had it been complete. The tumor above, and the finger and catheter behind and in front, performed the part of such guides.

The operation was commenced by perforating the centre of the obstruction with an ordinary trochar, which was pushed in to the depth of an inch, and the opening widened by a crucial incision with the scalpel, so as to admit the forefinger of my right hand. The speculum was now withdrawn, the finger introduced, and the

obstructing tissue *torn* in every direction as far as I could reach. The dense and unyielding nature of the tissue rendered this part of the operation tedious and difficult, and so fatigued the hand that I was glad to accept the aid of Drs. Moore and Tunstall.

The way being opened as far as we could reach with the finger, the speculum was again introduced, passing in this time about four inches, and being arrested apparently about an inch short of the os tincæ. Pressure being still made upon the tumor, I carefully divided layer after layer with the scalpel, until I reached the os tincæ, which was immediately made known by an abundant flow of a fluid resembling tar in color and consistency, and perfectly inodorous.

The hips being lowered so as to promote the discharge, the patient was left for four hours. At the end of this time thirty-two ounces had been discharged, and the flow was still going on *with regular uterine contractions*, which continued for twelve hours, until every particle of the secretion had come away. The whole quantity amounted to forty-eight ounces, or about three pints. The patient having rallied entirely at the end of eight hours, was put to bed, and ordered half grain of sulph. morph., and perfect quiet to be observed.

Oct. 16th.—Patient rested well last night, and feels tolerably comfortable this morning. Pulse 80, soft and regular; tongue natural, and appetite good. Upon examining per vaginam, I could easily feel the uterus. The organ was larger than it is in the unimpregnated state, and the os sufficiently patulous to admit the end of the finger in other respects. There was nothing remarkable about it. The patient did not complain of pain from the introduction of the finger, nor was there the slightest soreness from pressure over the abdomen. In the evening, finding that no urine had been discharged since the operation, I introduced the catheter, and drew off thirty ounces. Ordered milk and bread diet in small quantities.

17th.—Had a restless night, with slight shivering and thirst. Soreness upon pressure over the whole abdomen, but particularly in the hypogastric region. Pulse 110, moderately full; skin dry; tongue covered with white fur; anorexia; thirst; bowels constipated, and vaginal discharge whitish, and beginning to be fetid. Ordered an ounce of sulph. magnes. to be given at once,

and the vagina to be syringed with warm water dashed with vinegar, three times a day. Warm fomentations to the abdomen.

18th.—Less soreness than yesterday over the abdomen. Vagina very tender to the touch; discharge feculent; bowels moved once; complains bitterly when the syringe is introduced. Continue treatment.

19th.—General symptoms as yesterday. Vagina hot and tumefied; discharge very fetid; great pain upon introducing the finger; urine drawn off night and morning since the day after the operation. Continue treatment.

20th.—Parts very tender, and very little discharge from them. Administered chloroform, and made a minute examination with the speculum. Vaginal surface intensely red, swollen, and bleeding upon the slightest touch. Os tincæ scarcely discernible for the tumefaction around. In the evening there was some increase of fever, and the patient complained of great soreness. I fear the introduction of the speculum has done harm. Ordered fifteen grains Dover's powder at bed-time.

21st.—Patient passed a very restless night. Intense pain over hypogastrium; pulse 112, small and compressible; thirst; dry skin; decubitus on the back, with legs drawn up. Ordered a dozen leeches to the back.

℞. Hyd. Chlorid mit. gr. xii.
Pulv. opii, gr. iv.
Tart. Emet. gr. iv.
M. Pil. 12—S. one pill every two hours.

22d.—No improvement. Bowels constipated; pulse 120; feeble; tongue dry; complains of agonising pain along the sacrum; some tympanites. Continue pills. Ordered an enema of soap-suds and castor-oil, which produced one evacuation, with comparative relief. Hot fomentations around the hips and hypogastrium.

23d.—Fever continues. Discharge from the vagina is *sanious* and fetid; pain in the sacrum somewhat relieved. Added one grain of quinine to each of the pills, and gave them as before. Ordered f. ʒxii. of magnes. citrat., to be taken at two draughts. Injections (vaginal) of pyroligneous acid, laudanum and water. Continue fomentations.

Evening.—Pulse 130, and feeble; pain diminished; tongue

moist, and coated white; discharge from the vagina large and sanious, (I believe this to be the return of the catamenia;) bowels moved once; patient sleeps, and is sweating profusely; when aroused says she feels very weak. Continue treatment, with milk toddy.

24th.—Patient ptyalised; pain greatly diminished; pulse 100, small, but larger than yesterday; no appetite, but partakes freely of milk toddy and soup; sanious discharge still going on. Discontinue medicine.

25th.—All the symptoms better; passed urine to-day *sua sponte*, the first time since the operation; discharge from vagina less, but still sanious.

From this time *Jane* improved rapidly, so that on the 5th of November I was able to make a very thorough examination of the vagina. The lacerations had healed entirely, but there was so much contraction as barely to admit the forefinger up to the os tincæ; the constriction, however, was dilatable, and I introduced a sponge tent. In the course of a few hours this gave so much pain that it was removed by the nurse, but was again introduced on the next day, and borne with less inconvenience.

On the 12th November catamenia again returned, and continued until the 17th, the quantity and color being natural. During the flow, of course the tent was not worn, nor was any examination made. On the 20th I found that the contraction of the upper end of the vagina had increased; it would scarcely permit my forefinger to pass. The sponge tent was continued until she left the house on the 27th. We informed her master that she was not in a condition to go without treatment, and that unless the process of dilatation was continued, there would be a risk of the vagina becoming again closed. When she left the Infirmary, the forefinger, by exercising a moderate degree of perseverance, could be passed up to the os tincæ. The constriction yielding to persistent pressure like spasmodic stricture of the urethra.

On the 27th of April last Jane was again sent to the Infirmary. She stated that, until two months before, she had regularly had her monthly flow, although the discharge was less free, and accompanied with less pain than formerly. She had been under no treatment since I last saw her, the use of the tent being discontinued from the day she left the house. Upon examination I

found it impossible to reach the os tincæ, although there seemed to be an opening up to it. The speculum was introduced, and an attempt to find the opening made with a probe, but without success. No tumor could be felt from the rectum, nor fluctuation through the vagina, and yet I felt sure that there was menstrual blood locked up in the cavity of the uterus.

A second operation was contemplated, but it was deemed expedient to communicate with her master first. Pending the receipt of his reply, the patient was seized with a profuse discharge from the vagina of dark, grumous blood, more fetid than the pus from a rectal abscess. The discharge came on suddenly in the night, May 5th, and continued for five days, with entire relief to all the symptoms. Before any further examination was made a message was received from Dr. Southall, that her services were required at home, and that he would not have another operation performed yet. She was discharged on the 17th May, and I have not heard from her since.

Remarks.—The condition of the patient, when she last entered the Infirmary, is to be accounted for only upon the supposition that after the tents were discontinued, the vagina continued steadily to contract until it entirely closed, so far as the exit of a tolerably consistent fluid was concerned, while the admission of *air* might readily have been permitted. The contraction may have been of such a character as to make the small opening between the uterus and os externum, fistulous or *valvular* in its shape, thus locking up all secretion behind, but permitting a tolerably free ingress from without for the air. A certain amount of fluid having accumulated, an effort would be made to throw it off; this would produce irritation, possibly ulceration in the neighborhood of the constriction, and finally a breaking down of the obstruction, and a free exit to the fluid. There must have been an admission of atmospheric air to account for the excessive fetidness of the discharge.

It is probable that another operation will be required in this case. The first one may be considered, however, as entirely successful, and doubtless there would have been no ultimate difficulty had the process of dilatation been continued after she left the Infirmary the first time, or had she been permitted to remain until the treatment was completed.

The operation in this case is like to that performed in a similar one by Amussat, except that the *tearing* was completed at one operation, whereas in Amussat's case it required three or four *tearings*, at intervals of three days. As his case is one of considerable interest, and bears a close resemblance in many particulars to that just reported, I will give a brief history of it, condensed from the *Medico-Chirurg. Rev.* for October, 1836.

A girl, 15 years of age, was carried from Germany to Paris to consult some of the leading surgeons there. Her mother stated that she had enjoyed good health until about two years before, when she began to suffer severely from periodic attacks of pain in the abdomen, and in the region of the kidneys. At first they were attributed to obstruction of the bowels; but it was soon discovered that this was not the cause, and on examination it was found that there was no trace of any vagina.

When she came under Amussat's notice, in February, 1832, the abdomen was enormously distended; at the lower part was felt a firm, resisting, globular tumor, supposed to be the enlarged uterus. The external parts of generation appeared to be perfectly normal, but on separating the labia there was no vaginal orifice, but simply a concavity corresponding to the position of the orifice, and lined with a smooth mucous membrane. A catheter having, with some difficulty, been introduced into the bladder, it could be distinctly felt by a finger in the rectum, "in consequence of the great thickness of the intermediate parts;" and higher up the finger met with a large, rounded, tense, and fluctuating tumor, occupying the hollow of the pelvis. The nature of the case now became apparent. The urethra, bladder and rectum were tied together by cellular tissue, and the vagina, in at least two-thirds of its length, "mau quait absolument."

The prognosis was considered unfavorable. MM. Magendie and Marjolin thought the only thing that could be done was to perforate the uterus from the rectum, and thus relieve it from its contents. Boyer regarded the case as hopeless, founding his opinion on the history of all similar cases on record. He therefore strongly recommended that nothing should be done. Amussat, however, was unwilling to abandon the case as irremediable. He had but recently seen two cases of imperforation of the vulva, where he had succeeded in re-establishing the vaginal passage,

by gradually tearing asunder the union between the urethra and rectum with blunt instruments and with the fingers. With the consent of the mother and daughter, he proceeded to try the same method in this instance. We used at first a large sized straight sound, pressing it with considerable force against the obstruction in the direction of the vagina "*comme pour faire un trou.*" Having continued this pressure for some moments, he found that there was quite a deep depression left, without laceration or loss of blood; a small piece of sponge was placed in the hollow thus made, and retained by a bandage. Three days afterwards the operation was repeated, with the fingers, the points being laid close to each other and then gradually separated so as to tear the tissues gently. By having a catheter in the urethra and a finger in the rectum the risk of wounding these organs was avoided. When two inches of the canal were gained, he could feel the distended uterus, and, on the 9th of March, he perforated the tumor with a trocar, widened the opening with a bistoury, and let off twelve ounces of dark blood.

In the course of three days, peritonitis set in, with great prostration, tympanites, and a great tendency to stupor. The case was considered very critical, but yielded at last to leeching and mercurialization. The patient ultimately recovered, and when seen by Amussat in July, 1834, two years after the operation, was in fine health, and menstruating regularly. The vagina was very contracted, but adhesion had been prevented by the frequent use of bougies. The true state of the parts, at that time, is described in the following words of Amussat, after consultation with Magendie and Marjolin: "il existait un petit vagin, qui s'etait formé aux depens des petites et meme des grandes levies, la muqueuse ayant eté attirée dans le vagin artificiel par la cicatrice; *et au fond de ce vagin on decouvrait un trou, ou fistule, qui conduisait á la matrice et par lequel l'ecoulement des regles se faisait librement.*" The part of this sentence italicised describes, I believe, the state of the parts in my patient, when she last left the Infirmary. Indeed the whole case bears a very strong resemblance to mine, not only in regard to its history and the condition of the genital organs, but also in regard to the mode of relief adopted.

The danger of fatal peritonitis after the operation for occlusion

of the vagina, in cases of retained menses, is admitted by all surgical writers. Even when no violence is done during the operation to the surrounding tissues, the simple evacuation of the contents of the uterus seems to be inseparably connected with this formidable disease. In Amussat's case, the gentlest means were resorted to, and the whole operation conducted with all the caution and skill which distinguished that celebrated surgeon, and yet the patient barely escaped with her life. M. Capuron reported a fatal case in 1840, and was of opinion "that when any portion of the vagina is wanting, it is imprudent to have recourse to any operation, under the risk of compromising the life of the patient."

In the July No. of *Med. Chir. Rev.* for 1830, Mr. Worthington reports a case in which he "carefully divided with a scalpel a dense cellular structure, of about half an inch in thickness, situated at the orifice of the vagina, and gave exit to about a pound of dark colored fluid." Notwithstanding the abdominal tumor subsided immediately, and the girl felt greatly relieved, peritonitis set in three days after, and she died on the fourth day. Professor Languebec relates a similar case, in which death took place on the fifth day after the operation, and attributes the tendency to inflammation to the long retention of the menses.

Boyer, who has treated at considerable length of the various congenital defects of the female organs of generation, says, "death is the inevitable consequence of the accumulation of the mensus in the uterus, where there is a *complete* absence of the vagina." I presume, then, that such accumulation is proportionably fatal where there is *partial* absence of the vagina. He says, too, that after patients have escaped the wounding of the rectum and bladder during the operation, he "has known them die from inflammation of the uterus and of the adjoining parts."

But notwithstanding the dangers of the operation for retained menses, especially in those cases where there is total or partial absence of the vagina, no surgeon would be justified in refusing to perform it. Death must be the ultimate result if the accumulation is permitted to go on; this can but occur if an attempt is made to relieve by operation, and there is certainly *a chance* of success, of which the patient should always have the benefit.

Cases of congenital occlusion are fortunately very rare. I

speak not now of simple thickening of the hymen, which frequently serves to retain the menses, and is perforated with a thumb lancet, without difficulty or danger, but of that occlusion which results from a partial or total absence of the vagina. I can find but six cases reported since 1820, although I have carefully examined many of the leading Journals of England and the United States, for 30 years past. The operation, therefore, herein reported, has not been often performed, it is one of some interest, and for this reason I am induced to publish it.

Norfolk, Va., July 16, 1853.

THE MEDICAL EXAMINER.

PHILADELPHIA, AUGUST, 1853.

DEATH OF NATHANIEL CHAPMAN, M. D.

The declining health of Professor Chapman, for some years past, and his advanced age, had long since prepared us for the announcement of his death, which took place in this city on the 1st of July last. He had been, for the last three years, entirely withdrawn both from professional duties and general society, and his death was the result rather of a slow and gradual decay than of any positive disease.

Dr. Chapman was a native of Virginia, where he was born, in Fairfax Co., on the 28th of May, 1780. His family was of an old and respectable English stock; his paternal ancestor, who came to Virginia with the first colony, having been a captain of cavalry in the British army, and the youngest son of a cousin-german of Sir Walter Raleigh. The family settled on the river Pomonkey, some twenty miles from Richmond; but the branch from which the Doctor is descended, migrated, about a century and a half ago, to Maryland, and fixed itself on an estate on the banks of the Potomac, nearly opposite Mount Vernon, which is still, we believe, in their possession. The Doctor's father, however, went to Virginia upon his marriage, where he afterwards remained.

Dr. Chapman received his early education at the Classical Academy of Alexandria, founded by General Washington, where he passed six

years. He subsequently spent a short time in two colleges, though not long enough, as we have heard him say, to owe either any obligation. He came to Philadelphia in the autumn of 1797, and commenced the study of medicine with the late Professor Rush, of whom he became a a favorite pupil. He continued three years in the office of Dr. Rush, and in attendance upon lectures at the University of Pennsylvania, from which he received his degree in the spring of 1800. The Doctor's thesis was upon *hydrophobia*, written at the request of Dr. Rush, in answer to an attack upon his favorite theory of the pathology of that disease. Dr. Chapman had previously prepared another thesis, on the "Sympathetic connections of the stomach with the rest of the body," which he afterwards read before the Philadelphia Medical Society. This contained the substance of his peculiar views on fever and other diseases, as well as the modus operandi of medicines. While a student, Chapman found time to become a contributor to the Portfolio, a magazine of some celebrity in its day. His contributions, under the signature of Falkland, obtained considerable popularity.

In 1801, Dr. Chapman went abroad, where he spent four years—chiefly in Edinburgh and London. He remained a year in London, the private pupil of Abernethy, and thence passed to Edinburgh. Here he not only turned to account the advantages of the then celebrated school of medicine, but he enjoyed also the privilege of free intercourse with the distinguished literary and scientific circles of the modern Athens. He became intimate with many of the eminent persons of those days, among whom may be mentioned Dugald Stewart, the Earl of Buchan, and Mr. (afterwards Lord Chancellor) Brougham,* then a fellow student. Before Dr. Chapman's departure from Edinburgh, Lord Buchan gave him a public breakfast, on the birthday of Washington, at which a number of distinguished persons were present, when he took the occasion to entrust him with an interesting relic, valuable from a double historical association. Lord Buchan had presented to General Washington a box made of the oak that sheltered Sir William Wallace, after the battle of Falkirk, with a request to "pass it, in the event of his decease, to the man in his country who should appear to merit it best." General Washington, declining so invidious a designation, returned it by will to the Earl, who committed it to Dr. Chapman, to be delivered to Dr. Rush, with a view

* In 1809, Dr. Chapman republished, in Philadelphia, Mr. Brougham's speech in the House of Commons, on the British Orders in Council, with a biographical sketch of him, in which he predicted his future eminence. Lord Brougham was then quite a young man, little known in this country.

to its being ultimately placed in the cabinet of the College at Washington, to which General Washington had bequeathed a large sum.

Dr. Chapman returned to the United States in 1804. He established himself in Philadelphia, and in 1808, formed a matrimonial connection with Rebecca Biddle, daughter of Col. Clement Biddle, from which, during a period of nearly fifty years, he derived the highest degree of domestic happiness. His success in practice was rapid, and he became almost immediately the favorite physician of a large portion of the higher classes of Philadelphia, with whom he enjoyed a popularity as a practitioner, which has, perhaps, never been equalled here. A rare combination of personal qualities—attractive manners, wit, great conversational powers, and the kindest feelings—made Dr. Chapman as personally popular as he was professionally eminent.

As a writer and lecturer, Dr. Chapman long occupied a high rank. Soon after his return home, he published a work entitled "*Select Speeches, Forensic and Parliamentary,*" with critical and illustrative remarks, in five 8vo. volumes, which attracted much attention. He afterwards, however, confined his pen to scientific topics.

The year of his return to the United States, 1804, he gave a private course of lectures on Obstetrics, which proved so popular that, in 1806, at the age of twenty-six, he was elected adjunct to the Professor of Midwifery in the University of Pennsylvania, and soon afterwards he was elected to fill the chair of the Materia Medica. At the death of Rush, in 1812, he was transferred to the chair of Theory and Practice, which he filled from that date till his resignation in 1850. Professor Chapman's lectures, delivered as they were annually to large classes, for a period of nearly forty years, are of course familiar to no small portion of the profession of the United States; and it is almost superfluous in us to speak of them as erudite, elaborate and highly finished compositions, enriched with the stores of the most varied reading and the largest personal experience. They have been given to the public in various forms; many of them were published at length in the early volumes of this journal, and a compendium of them was subsequently issued, under the editorial supervision of Dr. N. D. Benedict, now of New York. Dr. Chapman's delivery of his lectures was animated, graceful, and emphatic. His voice had a slight nasal intonation, which was not unpleasant to the ear when familiarized with it. His lectures were read from the manuscript, but were frequently pointed and enlivened by the extemporaneous introduction of apt anecdote and humorous illustration.

In addition to his course at the University, Dr. Chapman for a long

period gave clinical lectures in the hospital of the Philadelphia Alms House. For nearly twenty-five years, also, he delivered a summer course of lectures in the Medical Institute of Philadelphia. This institution, which is still in existence, and is the oldest in the United States of the kind, was founded by Dr. Chapman, although he generously declined all participation in the fees, or control over the appointments to chairs.

Dr. Chapman has filled numerous honorable appointments in medical and learned societies. He frequently occupied the post of President of the Philadelphia Medical Society, and was the successor to Duponceau in the eminent distinction of the Presidency of the American Philosophical Society.

Dr. Chapman's principal work is his "*Therapeutics*," published in 1817, which went through seven editions, one of them surreptitious. This treatise long maintained distinguished popularity among the works on Materia Medica, and now occupies a high rank as a book of reference. The author's views, however, on the modus operandi of medicines are of the ultra-solidist scoool, and, it is hardly necessary to add, not in accordance with received opinions.

In 1820 Dr. Chapman commenced the publication of the "Philadelphia Journal of the Medical and Physical Sciences," which he continued to edit for many years. The journal was undertaken with liberal views—the Doctor never receiving any salary for his services. He was subsequently an occasional contributor to different periodicals.

In the foregoing sketch we have presented a brief notice of the leading events in the professional career of Dr. Chapman. We leave, however, to other hands to do justice to the eminent social qualities which so long endeared him to all classes of the city in which the greater portion of his life was spent.

At the semi-annual meeting of the Faculty of Jefferson Medical College, held on the second day of July, 1858, the announcement of the decease of Professors HORNER and CHAPMAN having been made, it was resolved *unanimously*, that the Faculty, in common with their medical brethren, deeply deplore the loss to science of two individuals, the better part of whose valuable lives had been spent in the successful teaching of a profession of which they were distinguished ornaments, and to the advancement of which they had both so largely contributed.

Resolved, That a copy of this resolution be sent to the families of the deceased, and be published in the medical journals.

Extracted from the minutes. R. M. HUSTON, M. D.,
Dean of the Faculty.

MEDICAL NEWS.

CIRCULAR.

PHILADELPHIA, June 14, 1853.

To the Medical Profession.

In conformity with a resolution of the American Medical Association, it becomes my duty to inform you of the decision of the Committee of Publication, in regard to the price at which the forthcoming volume of Transactions will be furnished to the Association and others.

The price of *single copies* has been fixed by the Association at *five dollars.*

Any *individual* desiring two copies, will be furnished with them upon his remitting to the Treasurer *nine dollars.*

Societies, associations and institutions requiring *six* copies for the use of their members, will be supplied with them on remitting to the Treasurer *twenty-five dollars*, or they will be supplied with twenty-five copies on remitting *seventy-five dollars.*

Those who wish volumes 5 and 6, may obtain them by remitting *eight dollars.*

In consequence of the numerous illustrations, many of them highly finished colored lithographs, with which the forthcoming volume will be accompanied, its cost will considerably exceed that of either of those previously issued by the Association. To defray the cost of its publication, at least *fifteen hundred dollars*, in addition to the amount already received by the Treasurer, will be required.

Your attention is called to the following resolution, adopted at the last session of the Association:

"Resolved, That the Delegates from the several States be requested to appoint committees, who shall aid the Committee of Publication in procuring subscribers for and in distributing the annual Transactions of the Association."

D. FRANCIS CONDIE, *Treasurer,*
and Ch'm Com. Pub. A. M. A.

Dr. SOCRATES MAUPIN, late of the medical department of Hampden Sidney College, has been elected *Professor of Chemistry* in the University of Virginia, in the place of Dr. SMITH, resigned.

Dr. G. A. WILSON has been elected to the new chair of *Physiology and Medical Jurisprudence* in the medical department of Hampden Sidney College in Richmond, Va.

RECORD OF MEDICAL SCIENCE.

PATHOLOGY AND PRACTICE OF MEDICINE.

On employment of Ergot of Rye in some forms of Retention of Urine. By M. PASSOT, of Lyons.—Ergot of rye has not only the property of exciting the uterine contractions in cases of inactivity of the uterus, but is also very efficacious in the retention of urine which is caused by atony and paralysis of the bladder. MM. Baudin and Payan of Aix, were the first who endeavored to demonstrate that this agent does not act on the uterus alone, but rather on the lower part of the spinal cord. They also speak very highly of it as well in the affection which we have now under consideration, as in weakness or paralysis of the lower extremities.

Drs. Kinsley, Canuto-Canuti, Sainmont de Rocroy, Allier of Marcigny, have also recorded cases which bear favorable testimony to the utility of ergot in paralysis of the bladder. I will now briefly mention some of them:

Capt. B., aged 60, suffered from dysuria, which had increased greatly during the last three months, until it suddenly turned to a complete retention, which necessitated the employment of the catheter several times a day. For two months a host of remedies were used without avail; there was not the slightest improvement. The prostate became enlarged, and the patient suffered much from the use of the catheter, which had to be passed twice every day.

Fifty centigrammes (about eight grains) of ergot of rye, infused in a cupful of boiling water, was administered three times a day. At the expiration of six hours, the patient passed a small quantity of urine, and required the use of the catheter only once in the day. Afterwards it was only passed once in the forty-eight hours, and after ten days the bladder was left to itself (*Kinsley's Journal des Comm. Med. Chir.*, March, 1844.)

A lady, aged about 75, was affected with paralysis of the bladder, which for a time required the use of the catheter. Ergot was prescribed in doses of fifteen decigrammes (about twenty-eight grains) in infusion. On the sixth day of this treatment, it was no longer necessary to pass the instrument, the patient being able to pass water spontaneously (*Canuto-Canuti, Bull. des Sciences Med. de Bologne*, 1845.)

A man, named Rousseau, aged 58, of a nervous temperament, was, in consequence of a fit of passion, attacked with a complete inability to urinate. The bladder was obliged to be emptied by the catheter. The inertia of this organ continued in spite of cold injections to it, cold enemata, the application of ice, also a blister to the hypogastrium.

Strychnine applied, by means of ointment, as a dressing to the blister, also by frictions in the axillæ, on the following day produced cramps in the legs and arms, and was presently accompanied by stiffness, so that it became necessary to discontinue the use of this remedy. There was not the slightest action on the bladder. It was at this stage that the author

conceived the idea of giving ergot of rye. He prescribed six grammes (about ninety-two grains) coarsely powdered, to be put into a litre (about thirty-four ounces) of water, macerate for two days, filtered, and injected cold into the bladder. Seven minutes afterwards the patient experienced a desire to urinate, which, however, he could not then satisfy. The next morning the injection was again administered. Eight minutes after he had vesical tenesmus, and then spontaneous emission of urine. The injections were continued for some days. The cure was complete. (*Sainmont, Gazette des Hôpitaux*, 1848.)

In 1848, Dr. Allier of Marcigny, sent a letter to the National Academy of Medicine, in which he gives as the result of his observations, that in only one out of fourteen cases ergot proved of no use.

I also am in possession of some cases which, in an incontestible manner, prove that ergot is capable of restoring the contractility of the bladder. The following is the most remarkable:—In the month of July, 1846, I was consulted by M. H., aged 60, of a dry constitution, and a very well-marked nervous temperament. Mr. H. admits having indulged in venereal excesses, and in the excesses of the table, and it is these that he blames for the vesical paralysis from which he is now suffering, and which requires the catheter twice a day: otherwise there is no symptom of organic alteration, no fever, no enlarged prostate. The canal of the urethra is free, through its entire length, and the urine when drawn off is perfectly clear. After having experienced the uselessness of tincture of cantharides and blistering the hypogastrium, I used the following prescription:—

Freshly powdered ergot . . . 2 grammes (30 grains.)
Mucilage, ... 120 " (31 ounces.)
A tablespoonful every half hour (shake the bottle.)
Ergot of rye, powdered, . . . 15 decigrammes (23 grains.)
Coca butter, ... a sufficiency.
To be made into two suppositories; one of them to be introduced night and morning.

On the same day, at the expiration of some hours, M. H. felt a desire to micturate. At my evening visit I ordered a bath. The patient was scarcely in it before micturation took place spontaneously and with force. From this time to his death, M. H. has always passed water freely and without the assistance of the instrument. I should add, that to make certain of the cure, I continued the remedy for three or four days, but in a decreasing dose. M. H. died on the 30th January, 1848, of an acute pleuro-pneumonia, during the course of which not a single morbid symptom appeared in the bladder. It is therefore certain that ergot cures retention of urine which depends on pure and simple atony or paralysis of the bladder. But with regard to paralysis consecutive to apoplexy, or depending on other affections of the nervous centres, it is well known that they are unaffected by the remedy we are treating of.—*Med. Times and Gaz.*, from *Gaz. Med. de Lyon* and *Rev. Med. Chir. de Paris.*

Cysticercus in the Human Brain. By A. BRUNNICHE.—A servant girl, aged 43, of healthy frame and aspect, but for three years subject to epileptic fits, came to the hospital May 3, 1851, suffering from supposed ague. Upon admission, her symptoms were, localised pain all over the left part of the forehead and temples, weakness in the muscles of the face, sparks and flashes of light in the right eye, occasional dilatation of the pupil, squinting, marked diminution of the intellectual capacity, combined with erroneous ideas and hallucinations, slow, unconnected utterance, frequent vomiting, involuntary discharge of fæces, slow pulse, and weakness in the lower extremities. She had often complained of cold, and want of circulation in the fingers; so that, at the commencement, her illness had been mistaken for ague. She died May 21.

Examination of the Body.—Skull-cap thinner than natural; the surface of the brain bulged forwards from the cranial cavity; the membranes were thin, but full of blood. There were three cysticerci within the cranium. The largest lay in the substance of the anterior lobe of the left hemisphere in a cavity the size of a hen's egg, projecting into the anterior part of the lateral ventricle, and making a marked depression into the corresponding corpus striatum. One worm was contained in this cavity, but in no way connected with the wall. It was surrounded by a sac as large as a hazel-nut, whence proceeded other similar, but distinct prolongations. A second worm was found in the middle lobe of the left hemisphere, near the preceding; and a third in the posterior part of the right hemisphere, both invested in a surrounding membrane. The three worms were unconnected with one another, and in no organic union with surrounding parts; yet they had formed for themselves a well-organised capsule or bag. As regards the question, how these animals or their ova found their way into the human organism, the author believes that they must have been conveyed to the brain by the current of blood, after being taken up from the free surface of the body. Some authors have, in these cases, remarked no cerebral symptoms. In this there was marked disturbance of the intellectual faculties, although the substance of the brain was not in any way altered.—*Med. Times and Gaz.* from *Hospitals Meddelelser.*

SURGERY.

On the use of Collodion for Erections accompanying Blennorrhagia. By Dr. DORINGER.—In the *Med. Central Zeitung*, there is reported a case of a rather curious application of collodion for gonorrhœal erections, and the result was such as we would like to see borne out by other cases: A young man, aged 28, was attacked for the third time with a blennorrhagia, which was accompanied by such severe and painful erections, that the patient could hardly stay in bed half an hour. After having tried without avail both camphor and narcotics, Dr. Doringer ordered cold fomentations, and when the penis had resumed its natural size, the application over its whole extent, even including its prostatic portion, to a strong coating of collodion. This had the desired effect, for from that moment the patient had no erection, and suffered only from a slight

scalding in passing urine. What proves that the amelioration was really due to the means employed is, that on the morrow, the collodion being taken off, the erections returned, but not so severely, and again ceased on the application of a fresh coating of collodion.—*Med. Times and Gaz.*, from *Rev. Med. Chir. de Paris.*

Lithotomy.—The extraction of a urinary calculus from the bladder by the recto-urethral operation has been now successfully accomplished by Mr. Lloyd, in three instances, at St. Bartholomew's Hospital. The stone was removed quickly, and the patients have done well. It may, therefore, be interesting to state, that the proceeding resembles, in great measure, the operation performed by Vacca Berlinghieri, and described by Malgaigne. (*Manuel de Médicine Opératoire*, p. 686, 1843.) The subject having been placed as in the lateral operation, a staff is introduced into the bladder, and given to an assistant, who is directed to hold it in a vertical direction, so that the groove should correspond exactly with the mesial line. The index finger of the left hand is introduced into the rectum, the palmar surface being turned forwards. Upon its flat surface a straight bistoury is inserted to a depth of eighteen millimetres (about nine lines) from the margin of the anus. The handle of the knife being then depressed, the point is thrust through the walls of the intestine, and the edge being also carried upwards, the sphincter ani, the inferior part of the rectum, the perinæum from the anus to the bulb, and the cellular interval which separates these parts, are divided together. The inferior region of the prostate can then be felt through the wound. In front is felt the membranous portion of the urethra containing the staff. The nail of the index finger is next used, as in the lateral operation, to discover the groove in the staff, and to conduct to it the point of the bistoury. The staff is then withdrawn, and the bistoury is thrust into the bladder; the edge is turned downwards, so as to divide partially, but not completely, the prostate in the mesial line, care being taken to avoid re-entering the incision of the rectum. Therefore, this operation effects the division of those parts which were torn in the old operation with which the "apparatus major" was associated. Mr. Lloyd introduces a speculum into the rectum; his incision is, perhaps, somewhat deeper than that of Vacca Berlinghieri; he *dilates*, but does not cut the prostate, unless the stone should be of very considerable size.

The incision appears remarkaby small when the operation is concluded; and, as Malgaigne has observed, at each effort of excretion, the mucous membrane descends over the wound, which is thus placed under conditions most favorable to healing without leaving a fistula.—*Med. Times and Gaz.*

OBSTETRICS.

On Painful Distension of the Vagina after the Birth of a Child. By Dr. Leopold.—Dr. Leopold states that he has several times met with examples (never in primiparæ) of excessive suffering, coming on from half an hour to an hour after the passage of the child, and referred to the vagina. It is of the most agonizing character, described by the women as worse than when the child is passing, and causing them to twist and

toss about in agony. It arises from distension of the vagina, either by accumulated coagula, or a very large placenta. In the first case, owing to the quantity of blood lost, there are always the early symptoms of uterine hæmorrhage; and the women, usually having suffered already from hæmorrhage in former labors, are dreadfully frightened at their danger. The softish but not distended uterus is felt pushed up into the umbilical region. The hand should be at once introduced into the vagina, and after the coagula are completely removed, it should be retained there for at least half an hour, keeping two fingers on the watch within the relaxed os uteri, and irritating this if required.

In the other case there is always a large placenta, which will not yield to moderate traction, partly because its size prevents it from easily traversing the vaginal passage, partly from a spasmodic action of the *constrictor cunni*, and partly because the membranes still remain in connection with the uterus to some extent. Notwithstanding the pain it will cause, the entire hand must be passed into the vagina, so as to embrace the whole placenta and bring it down.—*Neue Zeitschrift für Geburtskunde*, from *Brit. and For. Med.-Chi. Rev.*

MATERIA MEDICA AND THERAPEUTICS.

Cases of Poisoning with Lucifer Matches. By C. TRENERRY, Esq., Surgeon of the Civil Hospital, Gibraltar, and Corresponding Member of the Surgical Society of Ireland.—Three cases, within a very short period, wherein Lucifer matches were swallowed for the purpose of self destruction, have presented themselves to my observation. Two of them proved fatal; the third recovered.

The history of two of these cases may be related in a few words: one, a young Spanish lady, resorted to the expedient from disappointment: the other was a Spanish widow, mother of three children, who, having committed herself with a young man, aged 18, hoped by taking the poisonous substance, to induce him to marry her. The contents of the stomach were dislodged, and she recovered.

The third case was that of a native of this garrison, aged 22, who was engaged to be married, but unfortunately too close an intimacy with her lover prior to this rash act exhibited itself, she being in the seventh month of pregnancy. Her aunt states that at no time were the symptoms very urgent, nor is it known when the matches were swallowed.

The deceased first complained of pain in the stomach at 5, A. M, on Tuesday, the 17th of May, 1853, for which some "Yerba Louisa" tea was given, which relieved her. At 8, A. M., she reluctantly partook of an egg and tea for breakfast, and at eleven o'clock had some broth, but could not bear the sight of bread. During the day she complained of thirst and giddiness: in the evening took tea and went to bed. The next morning, the 18th, about 6, A. M., still suffering from pain and giddiness, her aunt gave her a dose of castor oil, which she ejected immediately, and frequent vomiting supervened during the day. An enema of the decoction of marsh mallows and olive oil was administered, which afforded temporary relief. In the evening, she confessed that she had taken two boxes of Lucifer matches, containing about one hundred. A

medical man was immediately consulted, who ordered an emetic and olive oil, which she said relieved her very much; but vertigo, vomiting, intense thirst, slight convulsions, and syncope, followed in rapid succession, and after midnight she became insensible, and expired at 6, A. M. on the 19th. The following day, at noon, I made a post-mortem examination, and noted the following: Body well formed, but of short stature. Face has a distorted and dirty appearance from irregular patches of congestion. Globe of the eyes very prominent; cornea of a dry and dull appearance; pupils dilated, and blood oozing from the nostrils. Livid spots about the lips, gums and tongue. *Upper part of chest and shoulders quite green and emphysematous from decomposition.* Breasts plump, and nipples marked by darkish areola and papillæ. Abdomen distended and tympanitic, *but no appearance of decomposition*, except in the fold of the groins. Vagina plugged by a dark coagulum of blood, the os uteri dilated to about the size of a shilling, and the head of a child pressed against it, as if labor had commenced prior to death. Dark feculent, or tarry-looking matter escaping from the anus. Finger nails livid, as also back part of the anus and depending parts of the sides of the body, and in some parts it is quite green. Lower extremities pale and chloritic-looking; the calf of left leg being hard and globular, as if affected with cramp. Gas escaped with a hissing noise from the apertures made by the saw in opening the skull. Dura mater dry and glistening; substance of brain so much softened as to prevent the usual examination. Ventricles very dry. Cerebellum, a perfect pulpy or custard-like mass. The encephalon throughout of a dirty cream color. Pectoral muscles soft, and easily torn. Lungs dark-colored, but crepitant; their posterior portion congested, as is usually observed after death. Pericardium contained about two ounces of dark bloody serum. Heart pale and flabby; auricles and ventricles empty. Abdominal viscera had a dull appearance. Stomach greatly distended with gas; its external surface healthy-looking. Small intestines collapsed; large intestines not so distended as is usually seen. Anterior surface of liver pale. Gall-bladder empty. Spleen very dark-colored. Uterus contained a well-formed but dead female fœtus, of about seven or eight months, floating in the liquor amnii, the membranes being unbroken. The cellular tissue and depending or posterior portions of the liver, pancreas, spleen, and kidneys, unusually congested, amounting almost to extravasation of blood. The pharyngeal and cardiac end of the œsophagus of a dark or bruised color; the canal appears contracted and the mucous membrane dry, one rounded carbonacious head of a match adhering to its surface. Stomach contained about four ounces of a dark, unctuous treackly-looking fluid. The mucous-membrane of a whitey-brown color, and the cardiac or larger end thickly vesicated, as if scalded; the middle portion retained its rugous appearance, although much thicker and paler than usual. The pylorous quite smooth, pale, and thickened, as also the mucous membrane of duodenum, which, with about three feet of the jejunum, contained a similar black-looking fluid as the stomach. The remaining portion of small intestines were merely lined with a creamy feculent substance interspersed with patches of greenish or bilious matter.—*Dublin Medical Press.*

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NOTICE TO CORRESPONDENTS.

Communications and Books for notice should be addressed to the Editors, care of Messrs. Lindsay & Blakiston.

Letters, &c., connected with the *business affairs* of the Journal should be addressed to the Publishers.

Papers for publication must be received *before* the 20th of the month, or they cannot appear in the forthcoming number.

The following Journals have been received in exchange:

American Journal of Medical Science. July, 1853.
Western Lancet. December.
New Orleans Monthly Medical Register.
Southern Journal of the Medical and Physical Sciences.
New Orleans Medical and Surgical Journal.
Medical Recorder.
Western Medico-Chirurgical Journal.
Union Journal of Medicine.
Medical News. Philadelphia.
Buffalo Journal.
New York Medical Gazette.
The Boston Medical and Surgical Journal. (Weekly.)
Stethoscope and Virginia Medical Gazette.
New Jersey Medical and Surgical Reporter.
Transylvania Medical Journal.
Southern Medical and Surgical Journal.
New Hampshire Journal of Medicine.
The London Lancet. (Weekly, London.)
The Medical Times and Gazette. (Weekly, London.)
Dublin Medical Press.
Dublin Quarterly Journal.
British and Foreign Medico-Chirurgical Review.
Journal of Psychological Medicine.
London Journal of Medicine.
Edinburgh Medical and Surgical Journal.
Journal of Psychological Medicine.
London Pharmaceutical Journal.
Edinburgh Monthly Journal.
Journal of Pharmacy.
North Western Medical Intelligencer.
American Journal of Insanity.

BOOKS RECEIVED.

Little on Deformities. From Messrs. Longman.
Budd on the Liver. From Messrs. Blanchard & Lea.
Miller's Practice of Surgery. From the same.
Wilde on Diseases of the Ear. From the same.
Henle's General Pathology. From Messrs. Lindsay & Blakiston.
Meigs on Diseases of Children. From the same.
Walton's Ophthalmic Surgery. From the same.
The Microscopist. From the same.
Maternal Management of Children. From the same.
Hooper's Manual of Practice of Physic. From Messrs. Barrington & Haswell.
Dr. Hamilton's Fracture Tables. From the Author.
Dr. Armor's Prize Essay. From the Author.
Dr. Burwell on Chloroform in Midwifery. From the Author.

ERRATA IN AUGUST NUMBER.—Dr. Upshur's Paper.

Page 525, 13th line from bottom, read, "In other respects, there was," &c.
" 526, 4th " top, for "feculent" read "fetid."
" " 22d " " " " back," read "belly."
" 529, 15th " bottom, for "thickness" read "thinness."
" " 10th " " for "mau quait" read "mau quait."
" 530, 4th " top, for "we" read "he."
" " 11th " bottom, for "levies" read "lévres."

The foreign correspondents of the Examiner will please direct their Exchanges and other communications to the care of Tribner & Co., No. 12 Paternoster Row, London, or Mr. H. Bossange, 21 Bis, Quai Voltaire, Paris.

THE

MEDICAL EXAMINER,

AND

RECORD OF MEDICAL SCIENCE.

NEW SERIES.—NO. CV.—SEPTEMBER, 1853.

ORIGINAL COMMUNICATIONS.

On the Diseases and Injuries of Seamen. By G. R. B. Horner, M. D., Surgeon U. S. Navy, Philadelphia.

In our preceding remarks we have spoken of the means of obtaining healthy and capable persons for sea service, and of the best methods of keeping them efficient—many may be kept so—but in spite of all precautions, some cases of disease or injury will certainly occur among them, it matters not how small a crew may be. When it is large, on a long voyage, we must expect a corresponding increase in the number of disabled. It has appeared, then, that it might be useful for me to give an account of the diseases and injuries I have met with at sea, and of the curative means adopted, but chiefly of those which have been found the most efficacious, without undertaking to give a learned treatise, either on new or old remedies, and entering into a long disputation on the theory of the diseases, and the many modes of practice recommended since their first discovery. The reader likewise must not be disappointed, if he should find omitted many of the nice distinctions now made in their names, and which serve to create confusion and obscurity rather than to elucidate the

nature of diseases. Pedantic terms may sound melodiously, and yet fail in sense and imparting knowledge either respecting the manifold diseases to which the human race is liable, or the multitude of remedies used for their cure. For this latter reason a grand display of Latin prescriptions, setting forth long lists of medicines, puzzling the writer as well as reader to remember well, will be sedulously avoided—not only for this reason, but from my want of belief in the efficacy of making such heterogeneous compounds, and from my preferring simple remedies. After these preliminary remarks, I will observe, that although, as is well known, seamen are subject to the same diseases and injuries as landsmen, they are often modified by their peculiar mode of living. Seamen work, sleep, eat, drink, and dress differently from the former. At sea this happens from necessity; on shore from habit. The floating, peculiar structure of their ever-moving habitations, also produces changes in the disorders and injuries of seamen, and hence we find them varying frequently according to the class and state of their vessels, the general management of these, and the weather or climate where they are; yet, when any one disease becomes epidemic in a ship, at the same time that it commonly spreads with rapidity, from the crew being as it were imprisoned together, and it not being possible to perfectly separate the sick from the well, the type of the disease will be found very much alike. This will be rendered greater by their similarity of living, as respects food, drink, clothes, and other modifying causes. From the impossibility of flight, when an infectious or contagious complaint occurs in a vessel at sea, and far from port, all in her, except a few who may be protected from the disorder, know their liability to being attacked, and are not so susceptible of being seized with a panic as people on shore, and soon become accustomed to the danger, and resigned to whatever fate awaits them. Familiarity, too, with dangers from other causes blunts a sailor's sense of fear, and though his limited views into futurity should not make him a predestinarian, he suffers whatever evil befalls him with singular resignation, and meets death without fear. Hence I never knew this to kill a sailor, nor one to be accused by his physician of having died of fright. On the contrary, sailors bear disease with patience, meet death with philosophic complacence; and if they get

well, pursue their erratic occupations and dissolute amusements with no apparent compunctions of conscience. Though they may read some of the numerous bibles distributed by societies in every vessel, and attend divine worship with great decorum, they are apt to do the first for pastime, and the last from the mechanical effects of discipline. The sacred books being put down, the service at an end, they become as reckless as ever, and think no more of what has been read or heard. When death at last is impending, they may take the medicines prescribed, from respect and obedience, but may care so little about it as to reject them, as I once saw done by an old sailor named Michael Leopold, dying of diarrhœa, caused by his being entrusted with a bottle of dissolved tartar emetic prescribed by the surgeon for a chronically enlarged testis. When he had been excessively prostrated, and the clammy sweat of dissolution was upon him, he cried out that "he was dying, and he was glad of it; take that brandy-toddy away," said he, "I will have none of it, for when I wanted it you would not give me any." Thus the old man died without further medicinal aid, and striking every person present with amazement at his refusing what no sailor was ever before known to reject in any shape whatever, for every one believes in the sovereign efficiency of grog. Internally they think it possessed of wonderfully healing powers—even greater than that of tar to any hurt, or of that panacea brown soap and sugar for an application to all boils and swellings, and external affections generally, whether the result of disease or injury. Some of the most ordinary external disorders to which seamen are liable are the former of every grade, from the smallest boil to the most aggravated phlegmon, partaking occasionally of a carbuncular character, involving all the tissues of the skin, and resting on the investing fasciæ of the muscles beneath. When this occurred the local inflammation occasioned great pain and febrile symptoms, the patient was unfit for duty, had to be taken on the sick list, and to undergo regular treatment.

The same had to be done in cases of less severity, and which were attended with only local symptoms, either from their disabling the affected parts, interfering with the proper use of the limbs, or it not being possible, while the patients were performing duty, to treat them conveniently. In cases of all kinds,

these phlegmons would not be regarded as of local origin only, and in their treatment it was necessary to regulate the diet, forbid gross, crude, irritating ingesta, and to administer medicines internally to expel them, and restore the system to a healthy state. Saline cathartics were sufficient, usually. Severe cases required magnesia alone, or with epsom salts, or rhubarb, at the same time warm linseed poultices were applied, until suppuration had occurred, the phlegmons had came to a point, and then they were lanced so freely as not only to disgorge the cysts, turn out the hardened sloughs or cores in the centre, but to cause a copious effusion of blood from the parts surrounding the cysts. Afterwards, the poultices were renewed and reapplied until suppuration was complete, the parts had become soft and pale, and the pain subsided. The poultices were then left off, and some mild, soothing, astringent lotion used. A solution of the acetate of lead, in the proportion of a half drachm to a half pint of water, was commonly prescribed. Sometimes this lotion was introduced into the poultices to soothe the skin, and prevent a great extension of inflammation. Care was taken also to procure if possible flaxseed meal of good quality. In some places this cannot be obtained, and at Gibraltar the best that could be bought, instead of being soft, oily, and nearly white, was in cakes, hard, dry, dark, and like sawdust. Such flaxseed meal is said to be obtained from the seed after the oil has been entirely abstracted by heat and pressure, and is unfit for poultices. Better ones can be made of ship's biscuit, steeped in boiling water, and mingled with a little grease or oil, when sweet. If in port, fresh bread, made into a mass with milk, may be more convenient, and make a better substitute for a good linseed poultice: or one of mashed potatoes may be prescribed when bread is too dear, or cannot be had. For some phlegmons likewise an excellent poultice may be made by pouring boiling water on the inner bark of the red elm, after it has been cut or ground into small pieces. When thus prepared it becomes very pultaceous, soft, adhesive, and soothing.

Similar treatment to the above proved best in many other superficial affections, either of a local or general character, and arising from idiopathic or symptomatic causes. Local treatment was seldom alone adopted, and constitutional was never neglected

when there was reason to believe the local disorders were mere signs of general ones, as was found in many eruptions, abscesses formed in the cellular substance of the axillæ, or about the lower part of the rectum, or beneath and at the root of the finger nails, constituting felons or whitlows. To these I have found seamen as liable as seamstresses, and have no doubt of their arising often in them from depraved digestion and bad diet, as well as local injuries and too great use of their fingers. During my late cruise, numerous cases of this kind happened at the same period that phlegmons were prevalent; and in one day, there were three admitted on the sick list for the former. A like treatment was followed, and as soon as the poultices applied had induced suppuration, free incisions were made into the cavities formed, to discharge their contents, prevent these from travelling beneath the nails, tendons and fasciæ, and producing caries of the bones, as I have witnessed. In one instance, those of a middle finger became so diseased, and caused such fungus in the joints and soft parts as to oblige me to amputate it at its junction with the metacarpal bone. From time to time similar abscesses were met with in the feet, beneath the fasciæ and tendons of the soles, and were also cured by following the above practice of poulticing first and then making free incisions. But one of the most remarkable abscesses ever seen by me, was occasioned by a chronic rheumatism in the left hip, buttock, and adjacent parts. The person affected was a gigantic seaman, a blacksmith by trade, of the name of Henry Fry, who got the above affection by exposure in the Brandywine at New York in 1830. After he had suffered considerably there and while she cruised, he returned to the United States, and became armorer of the John Adams early the next year. During her cruise in the Mediterranean, he suffered greatly from pain in the parts—principally in the left hip and buttock, extending along the course of the sciatic nerve; used friction with vol. liniment, and wore a Burgundy plaster on the parts. Other local remedies were used, and in the middle of January, 1833, he was taken on the sick list, being no longer able to perform his duties. The skin over and about the left trochanter major was of a dark brown color, and much indurated. He was unable to stand, and limped; but both of the inferior extremities were of natural size, and his general health

was good. Treatment: Low diet, a poultice to the indurated parts, and a dose of calomel and jalap were directed. The next day, 20 leeches were applied, and the poultice continued. On the 18th, suppuration and ulceration had occurred; a fistulous orifice was formed over the lower part of the trochanter, and a probe was passed two inches and a half into the abscess. This increased rapidly, extended upwards and backwards, until it involved all the left buttock, and formed a number of other fistulæ above and below. One also broke out over the hip joint, and a scrofulous affection of it, as well as a lumbar abscess, were suspected. The purity of the pus discharged, its freedom from flocculi, the general absence of the marks indicative of a scrofulous diathesis, forbade such a conclusion; and the treatment was modified accordingly. It varied exceedingly, from the many turns the disease took. Sometimes, he was only locally affected, at others, he was feverish, and he was prescribed for accordingly, both local and general remedies. He took a number of blue pills, at intervals of one or more days; doses of Epsom salts and seidlitz powder, and rhubarb and magnesia in the morning; and had a solution of 5 grs. of the nitrate of silver in ℥i of water, injected into the abscess, to cause adhesion of its sides. A seton passed through two of the fistulæ, was used for the same purpose, and efficiently; the latter were repeatedly scarified—several incisions were made through the integuments, and finally, one almost a foot long was extended vertically down the buttock, to the back part of the trochanter, and in a line with the former. The gash was an enormous and frightful one—the parts divided were more than an inch thick"; and had I known, before beginning, the extent of the abscess, I might have been deterred from it; but having made an incision of three or more inches, I did not reach the bottom of the abscess, and making another quite as long with a like result, I at last had to make a third one. Scraped lint was then laid in the abscess; the two lips of the wound were united with adhesive strips; a plaster of simple cerate and a compress put over it; some wine, warm rice water, a dose of laudanum, and friction with volatile liniment, were prescribed, to ease pain, and bring on reaction; for he had become faint, and was covered with a clammy sweat, although he had taken a dose of laudanum before the operation was begun.

After he had recovered from the immediate effects of it, the general treatment was renewed. This consisted chiefly of a diet drink made of sarsaparilla, sassafras and mezereon bark, and extract of liquorice macerated in water, and made into a decoction. But many other remedies were used, to counteract the untoward symptoms occurring from time to time—as fever, diarrhœa, swelling of the abdomen on the left side, and acute pain in different parts. Among these remedies were tartar emetic conjoined with the effervescing draught, acetate of ammonia, antimonial wine, tincture of opium, opium in substance, the sulphate of morphia endermically applied after blistering, and by enemata. On the 1st of June, three days after the operation, the dressings were removed, the wound was cleansed of a large quantity of clotted blood, and the bottom exposed. It was smooth, glossy and formd by the gluteal muscles chiefly, but it extended in various directions under the integuments, and had several fistulous outlets, one of which was on the posterior upper part of the thigh. On the 4th, the dressings were again removed, and I found that the lint had produced a healthy secretion of pus, and that granulations were springing up on all sides; but on the 9th, so much irritation was caused by the former, that the wound became inflamed, fever occurred, his pulse rose to 120 in the minute, and so much pain was occasioned in the hip joint, that the lint was taken out, and a neutral mixture, made of sup.-carb. of soda and vinegar, mingled with 50 drops of laudanum, was administered. The adhesive strips were renewed, as required; the nitrate of silver was applied also, to heal the lips of the wound; and after the fever had entirely subsided, to remove debility, he took the sulphate of quinia and diet drink. June 16th, the parietes of the abdomen anterior to the iliacus internus muscle, became tumid, and sore to the touch; continued afterward to swell, and were poulticed. Suppuration occurred; and on the 27th of August, I made an incision into the swelling, and discharged a large amount of pus. Becoming more prostrated in the mean time, he was given an infusion of cinchona ʒij., pulv. gentian ʒss., pulv. zingiber ʒi., in lbs. ij. of boiling water. Lead water was used, to remove excoriation caused by the strips; a seton was kept in two of the fistulæ until their cavities were nearly closed; and by these means and similar

ones, by the 12th of October, the wounds on the buttocks, as well as the fistulæ there, had perfectly healed, leaving a handsome cicatrix. Only one small fistula remained unhealed, and but a small quantity of pus issued from it; he had perfect use of the thigh; his general health had been restored, his strength, appetite and spirits had returned, and a speedy restoration to duty was anticipated.

This happy condition had been attained, although the ship had been cruising from one end of the Mediterranean to the other—had visited France, Greece, and Oporto—the whole summer conveying vessels through the Archipelago from Smyrna, and was then on her voyage homeward. Most unluckily, however, on the 2d of November, two days after she ran out of the straits of Gibraltar, he was seized with a catarrhal fever, ascribed to damp air on the Atlantic, and impelled before a strong Levanter, or east wind, which had driven the vessel out of the Straits against the rapid current making into them. A misty state of the atmosphere prevailed in this part of that ocean, which is about midway between the Straits and Madeira, and its ill effects I have frequently observed. To relieve him, a half drachm of laudanum and the same quantity of antimonial wine were given immediately, and the next day he took the last named article with a half ounce of spiritus mindereri every two hours. The sulphate of quinine was then discontinued. The symptoms still became more unfavorable, the fever continued, the fistula remaining in the left groin, increased to double its size, the skin extending from the former to the buttock became inflamed and erysipelatous, the cuticle peeled off, the buttock swelled, ulceration began in the cicatrices, after they had become livid and excoriated, and by the 11th, nearly all the newly formed parts had sloughed away, leaving a vast ulcer about three inches wide and about twelve long, or the whole length of the great incision. In the mean time his fever continued, the pulse was small and frequent, and his mind flighty. Nevertheless we did not despair, but continued the spiritus mindereri and antimonial wine, gave him hot marshmallow tea; bathed his feet in hot water; put a leech on each temple, and a lead water poultice to the inflamed parts. On the 7th, the fever having left him, the mixture was stopped, the poultice left off, an incision made into the upper part of the but-

tock, and a quantity of decomposed blood discharged. A plaster of mercurial ointment was then put on the buttock, the edges of the ulcer were brought together with adhesive plaster, and retained by a compress and belt. Delirium continuing, a sinapism was put to the nape of the neck, which relieved it; and to sustain strength, he was again given the diet drink and compound infusion of bark, with a fourth part of sherry wine in it. Great attention, as during the whole previous treatment, was paid to his regimen and general comfort. The mercurial ointment proving too stimulating, was diluted with three parts of simple cerate, and he soon began to recover. The sloughed parts healed rapidly, the fistula, by aid of frequent scarification and powdered cinchona, was filled up; and by continuing the above medicines as long as needed, and giving the sulphate of quinine, he still more improved. He also took a blue pill every other night, a dose of powdered rhubarb and calcined magnesia on the morning after for two days; and by the middle of the following January, the hip and buttocks were again perfectly healed.

Finally, by the 3d of February, notwithstanding the ship had been at sea nearly the whole time,—had visited Mogadore, gone to Madeira and Teneriffe, passed through the calm, hot latitudes between that island and Liberia, spent several days at Monrovia, thence crossed over to the West Indies, stopped a week at Martinique, and for a fortnight had been blown off the coast of the United States by a cracking northwester, which raised a tremendous sea, and greatly rocked her,—then all parts entirely healed, he walked without help, and was then transferred to the naval hospital at Norfolk. From that he was soon discharged, well, applied some time afterwards, at the Philadelphia rendezvous, to reship, and being perfectly sound, was taken into service again, to make the air resound with his sledge hammer and anvil. Though not lame, as his progenitor, Vulcan, he strongly reminded us of him, as his muscular arm and huge body heaved up and down, and his heavy blows were laid on the red hot iron. But I regret to add, that this valuable seaman died some years afterwards, on board one of our national vessels, of dysentery, contracted during his cruise in the East Indies.

Another instance of abscess of the left buttock, had occurred in the same vessel, and in the person of the ship's cook, a slen-

der, decrepid man of 45 years of age, who also had a cataract in the left eye and amaurosis of the right one; besides, was dispeptic and diabetic. As in the preceding case, the disease was preceded by symptoms of sciatica, pain in the hip joint, and swelling over the left sacro-sciatic notch. He was taken under treatment, likewise, during the winter, was cupped, leeched several times, blistered, poulticed, took blue mass repeatedly, magnesia, &c. to work it off; had the blistered surface sprinkled nightly with the acetate of morphia, and was given, besides the tonics mentioned, an infusion of quassia. For the benefit of his eyes, a seton was introduced and worn for weeks in the nape of his neck. But five months after his admission on the list, and during the following May, the abscess had perfectly formed, and being about to ulcerate through the skin, was opened by a valvular incision. About five ounces of flocculent, straw-colored pus, were let out. It continued to flow for more than three weeks; he became prostrated and hectical; and as the ship was bound on a long cruise into the Atlantic, he was transferred to the flag ship Brandywine. Of what became of him afterwards I have never heard, and cannot give the result of his complaint, but surmise it was a fatal one.

The following case of abscess of a different kind, was sent to the John Adams from the Constellation frigate, to be carried home. The person was J. D., a young, handsome, delicate marine, who was said to have an affection of the urinary organs, ascribed to a fall down a ladder. He had undergone little treatment, and, according to his own account, taken only one dose of medicine, a large one of calomel. Being of scrofulous habit, this had salivated him, and caused soreness of the mouth, with ulceration of the gums. He was then weak and hectical: and, a day or two after he came on board the ship, was observed to have a small swelling on the left side of the nose, and its bridge. He stated, he had had the former broken when he was a boy, and the venereal disease eight years before. There was no other evidence of this having any thing to do with his ill health, and he was treated correspondingly, and for mercurialism.

An incision was made into the swelling—a half ounce of pus discharged; and the cavity being probed, the left nasal bone was found rough and carious. He was put on a plain, nutritious

diet: took magnesia, to correct acidity of the stomach; had the lunar caustic applied to the fungus, which sprung out of the wound made on the nose. He took the sulphate of quinine, and two diet drinks, of which the following was the principal. It consisted of sarsaparilla, ℥viij., lignum guaiaci, ℥ij., sassafras, ℥iv., mezereon, ʒij., honey, ℥viij., and water, two gallons, which was boiled down after maceration to two gallons. This decoction was cooled, strained, and taken as required. In the second case, the guaiacum and mezereon, which were too acrid and stimulating, were left out, and senna leaves added. After this decoction had been boiled down as the other, it was sweetened with loaf sugar, and used in the manner as above. Three weeks after he was taken on board, the alveolar processes of the upper jaw were found carious, and the nasal process of the superior maxillary bone, as well as the nasal, eventually became affected. In the meanwhile the ship had got to Liberia, he had been more prostrated by the heat of the climate, and was prescribed bathing in cold sea water. By this treatment, he recruited, reached the United States safely, and some time subsequently recovered his health, with the loss of the bridge of his nose. This case is, I consider, a very striking one of the positively poisonous effects of mercury, and it proves the great impropriety of giving it without regard to the constitution of patients. It moreover appears, that it is given wrongfully in other than syphilitic cases, and that its use should be avoided when other medicines can be as well employed without such consequences. To show how usefully the preparations of mercury may be used, and yet prove injurious, I will give the account of another case, that of Samuel Mahoney, a young sailor of 22 years, tall, slender, and disposed to disease of the lungs. He had been treated 18 months previously for pleuro-pneumonia, and cured by means of V. S., nitrous powders of the common kind, containing calomel, thirty-six leeches to the chest, the spiritus mindereri, and tart. emet. blisters, the sulphate of morphia, and demulcent drinks. He was readmitted for a tumor on the posterior face of the right olecranon process, as large as a hen's egg, and resembling a wen. He stated, that three months before he had fallen on the elbow, and the tumor had formed since then. As it was increasing rapidly, it was cut off by an elliptical incision, and was discovered

to have been formed of a thick sac, containing a half ounce of yellowish serum, a fibrous mass adhering to the internal surface by tendinous bands. The base of the tumor adhered so closely to the bone that it could not be perfectly detached. After the incision, the edges of the wound were brought together with adhesive strips, a compress of lint was applied over them, a pasteboard splint was put in front of the joint, and a roller passed around the fore arm and it, to prevent flexion and the protrusion of the naked olecranon through the wound. These things done, he took a dose of Epsom salts and magnesia; and these medicines having worked too actively, and with the bleeding caused too much debility, he was given a dose of laudanum and tinc. of lavender. The dressing remained undisturbed for several days, and was then removed. Every attention was paid him; he was kept on low diet, and at rest, and yet the wound became unhealthy. Granulations sprung up, and it filled; became fungous; projected a half inch above the lips; a number of large pustules formed on the adjacent skin; a solution of sugar of lead was used as a wash for these, and the lunar caustic applied to the fungus time after time, and as often as the dressing was removed. Notwithstanding, the fungus continued to grow, and I determined to try constitutional with local treatment. After the operations had been done for more than a month, I prescribed blue mass, five grains every other night, and powdered rhubarb, ℈j, with magnesia, ʒj., the next morning, and the caustic was applied occasionally. This treatment had a most happy effect. The fungus quickly sank down, the edges of the wound approximated, and, by the 10th of January, three weeks before the ship arrived at home, a perfect cicatrix had formed, and the elbow was well. This cure strongly illustrated the utility of mercury; but to show what injury it at the same time did, I will state that, on the 17th of the previous month, without any reason to suspect venereal taint, the right inguinal glands began to swell; a bubo formed and suppurated: twenty days afterwards a second one formed in the same part; and five days subsequently a third one appeared in the left groin, between the scrotum and thigh. The latter bubo was indolent; the two first, on being poulticed, formed a single large abscess, and the last of the two discharged its contents through the incision of the first one. All of them were

obstinate, and resisted local and general remedies. The nitrate of silver, Turner's cerate, cathartics, blue mass, and Lisbon diet drinks were of little service, and, in February, he was sent to the naval hospital of Norfolk, the buboes having been still unhealed, although his elbow remained sound. Hence, I was well pleased with the action of the blue mass in this respect, but was displeased at the palpable effect it had had in developing a scrofulous diathesis. Had the patient had chancres, or have been known to have been exposed to syphilis, the buboes might have been attributed to it; but neither was the fact; and his confinement to the ship or her boats for at least a year, rendered it impossible for him to have been infected within that period, as women were excluded from her.

A case of not less importance, if not of more, was that of a seaman transferred to the John Adams, at Athens, in Sept. 1838, from the flag-ship United States, which the year before had arrived in the Mediterranean. This case was also attended with enlargement of the inguinal glands, but he had in addition an induration of some of the lymphatic ones of the neck; one of the parotids was swelled, and there was extensive ulceration of the fauces, which had destroyed the right tonsil, and was attended with inflammation and tumefaction. He had been affected for nearly seven weeks, and nearly all his teeth were decayed. The molars had suffered most, pus filled the hollows, the gums were black, and a fistulous ulcer had penetrated the right side of the velum pendulum palati. His voice was hoarse and guttural, and deglutition difficult; the edges of the ulcers were thickened and inflamed; and, as he had had no venereal affection, was thin, pale, and had stronger marks of being of a scrofulous diathesis, his affection was considered to be of that nature; though, so far as I could learn, he had been treated only for an ordinary ulcerated throat, and had been using a number of gargles; among which there were two of the sulphate of copper and nitrate of silver.

Agreeably to my opinion of the scrofulous nature of his disease, an ointment of iodine, ʒj., basilicon, ℥j., was spread on a rag, and directed to be applied over the right parotid gland twice a day. He was also given a solution of iodine and hydriodide of potash, in distilled water, and in the dose of twenty drops, four

times a day. The dose was gradually increased to forty drops, and a strong solution of the nitrate of silver was applied twice a day to the ulcers by means of a mop.

In spite of this treatment the ulceration continued, penetrating the velum in another place, and then united the two parts together, so that it fell to the left side, and rested on the tongue. A sulcus was formed in the roof the mouth, and the palatine bones seemed to have been destroyed by caries. In the course of two weeks, however, the parts had improved, and the ulcer on the right side of the fauces had healed, though the velum on that side was nearly obliterated, and the uvula was considerably inclined to the other. The disease, however, continued in other parts, the fistula was detected in the right anterior half arch five weeks after he came under my care, and the solution of the nitrate of silver was reapplied by means of a hair-brush. This fistula remaining stationary, was then laid open with a scalpel, and bleeding very profusely, a solution of alum, in the tinct. of kino was successfully applied as a styptic; a diet drink of a similar kind to those mentioned was given. He took blue mass grs. x. every other night, the caustic was reapplied as required, the ulcers were scarified with a lancet repeatedly, and yet a month later the fauces were more inflamed, and so continued until in using the wash the half of what appeared to be the body of a dead bread worm was extracted from the ulcer in the velum. In a short time subsequently the throat became much less inflamed, the internal remedies were continued, and a gurgle of sulph. of zinc and sage tea used until it lost its good effect, and was then left off for the caustic in solution and substance. To remove costiveness several doses of cream tartar and sulphur in molases were given. Under this treatment, varied as required by the condition of the patient, his health was restored, the perforations in the palate closed, and the other ulcerated parts nearly healed by the time of his arrival in the United States. His transfer to the hospital prevented me from effecting a perfect cure, and this was the greater subject of regret as he had been under my care almost five months.

On the use of Sulphate of Bebeerine as a substitute for Sulphate of Quinia. By EDWARD D. DAILEY, M. D., of Smyrna, Del.

My attention was first called to the use of the *Sulphate of Bebeerine* as a substitute for quinia, in remittent and intermittent fevers, by the note of Prof. H. S. Patterson, published in the "Medical Examiner" for May, 1852, in which he urged upon the profession, the propriety of giving that drug a fair and full trial, both on account of its comparative cheapness and its freedom from producing the unpleasant effect upon the brain which sometimes follows the administration of quinine. Hoping I had found a remedy suited, in a great measure, to take the place of the last named salt, equally and in some cases more efficacious, and not obnoxious to the objection that it (quinine) is on account of its price, I sent to Philadelphia immediately—having at the time several obstinate cases of intermittent under treatment—and procured a quantity, for the purpose of giving the bebeerine a trial, and in which cases its anti-periodic properties were fully tested.

CASE 1st.—Mrs. H——, a widow lady from Philadelphia, then on a visit to Hunting Creek, Md.,—where I at that time resided—had had an intermittent for several months, for which quinia, bark in substance, the various preparations if iron, zinc, &c., had been used in succession, with the effect of checking the chill for a few days only; she had almost concluded to abandon entirely the use of medicine, and I was at a loss what to do for her (she postively refused to take arsenic) until I received the bebeerine. I then commenced giving her this in accordance with the recommendation of Prof. P., viz., ʒss. to ʒviii. water, with enough Elix. Vitriol to dissolve it, of which a table spoonful was taken every third hour during the apyrexia. The next paroxysm was not prevented but was delayed nearly three hours. After the subsidence of fever, she again took the bebeerine in the same manner, and so continued for two days entirely escaping the expected chill, nor had she any return during her stay in Maryland, which was five months after "missing her chill." I, however, continued the administration of the remedy by way of precaution, and on account of its tonic properties, gradually diminishing the dose, and at longer intervals, for a week. With the result of this trial, I was

highly gratified, and was confirmed in the determination to still further test its power.

Case II.—Miss H. D——, aged 17, had had three fits of ague, recurring every day, one day in the morning, the next in the afternoon—a double tertian. The patient was of bilious temperament, tongue covered with a dirty white coating, complexion icterode, sclerotica in the same condition, bowels constipated, with scanty high colored urine. I gave hydrarg. proto chlor. grs. x. to be followed in six hours by Ol. ricini ℥j., which purged her freely. I then gave the bebeerine in the same manner as in case I. Still the paroxysms continued to occur with no sign of abatement, notwithstanding I persisted in the treatment until she complained of a burning sensation in the stomach, when I withdrew the bebeerine, and one hour previous to the time for the next paroxysm, gave her sulph. quinine grs. viii., which completely warded off the chill; and by the use of Vallet's proto-carb. iron she speedily regained her strength and color.

Since the above I have used it in many cases with variable success, but as a general rule I have not been so well satisfied with its results as I have been with those from quinia. Notwithstanding I have used four ounces I do not know that I have met with more than three cases in which the recovery was clearly attributable to the bebeerine.

That the sulphate of bebeerine will ever supersede the sulph. of quinine I have not the remotest idea; first, because its *anti-periodic* properties are not so certain nor so speedily obtained; 2dly, because the sulph. of quinia is by far the cheaper article of the two.

Quinine may be had for from three dollars to four and a half per ounce, and from ten to twenty grains will usually cure an intermittent; whilst on the other hand, I paid for bebeerine fifty cents a drachm, which brings it above the average price of quinine, and in no case will less than from 30 to 60 grains effect a cure.

That bebeerine is a good general tonic, no one who has used it, will, I apprehend deny, and for that purpose I am in the habit of prescribing it; but even as a tonic we have others equally efficacious and much lower in price. At my suggestion, my friend Dr. W. D. Noble, of Federalsburg, Md., and my brother

Dr. S. T. Dailey of Somerset county, in the same State, have used bebeerine and their experience corresponds with my own.

A Singular Case of Delirium Relieved by Chloroform. By C. J. Pope, M. D., of Alabama.

What I propose on the present occasion is, to direct attention to the internal administration of chloroform in all cases of exaltation of vital action, dependent on nervous excitability.

The effects of this remedy in the case recorded below, although a solitary one, were so marked and salutary, that my mind was brought to the conclusion that in all similar cases its effects would be no less striking.

About the first of February I was called in haste to see a lad, of about fourteen years of age, who, immediately on rising from his bed, at a very early hour in the morning, and before it was entirely light, went under the dwelling of his father for the purpose of getting the eggs out of a hen's nest, in a hole of considerable depth, scratched out by the dogs. On getting into the hole, which was in depth about two-thirds his entire length, the hen which he had not supposed to be on the nest at that early hour, flew into his face, and this circumstance, together with that of his hold breaking, on attempting quickly to recover himself, so frighted him that spasms of the most violent character were the result. I saw him in half an hour after this happened, and at once opened the temporal artery, and bled him two ounces, which however had no effect in controlling the spasms. In a few minutes after the blood was stopped, I gave him an injection of tinct. of lobelia. In five minutes the violence of the spasms seemed to be slightly controlled, but returned again in ten minutes more. The lobelia was again administered with the same partial effect, which lasted about the same length of time. Foiled in all my efforts thus far to arrest the spasms even temporarily, I had recourse to many other antispasmodics, but to no effect. The spasms continued for thirty-six hours, at the end of which time they passed off, and left him in a most singular state of delirium, which lasted seven or eight days without a lucid interval.

Large doses of opium and camphor would partially quiet him for an hour or two, but the delirium invariably returned. Finally,

having given up all hope of his recovery, I resolved upon the following prescription: Aquæ camphoræ ʒii, tinct. valerian ʒii, chloroform ʒi, mixed. Of this I gave him a tablespoonfull, and in five minutes I perceived indications of quietude. I waited one hour and a half, at the expiration of which time I found symptoms of returning delirium. I then gave him a second and rather larger dose. In ten minutes he was quiet, in twenty-five minutes I had the satisfaction of seeing him in a fine sleep, which lasted all night, (it being then about ten o'clock,) and out of which he awoke on the following morning, entirely restored in mind, without any consciousness of what had transpired during the eight days of his illness.

His convalesence was prompt, and his recovery perfect.

A New Method of Treating Syphilitic Bubo. By B. W. Hazlett, M. D., of Wheeling, Virginia.

To the Editors of the Medical Examiner:

Gentlemen,—Through the medium of your periodical allow me to notice a method of treating Suppurating Syphilitic Bubo, which I find not made mention of elsewhere. The rationale of treatment is familiar to surgeons in chronic abscess, &c., &c., but no use has been made of it in suppurating lymphatic of specific character. My plan is simply to inject with the common ear-glass syringe of the following formula:

℞ Argent nitrat. cryst. . . . . gr. xxv.
Aquæ distillat. . . . . ʒi.
Mix.

Some little tact is necessary to bring the fluid in contact with the entire suppurating surface. This will be accomplished by care in the position of the patient, permitting the injection to gravitate to the extent of the bubo. If this is not effected easily, pressure from behind will drive the cautery to all the sinuses and interstices that exist. I am partial in opening (with the common thumb lancet) the bubo as soon as pus is separated, and immediately, on pressing out the virus, to administer the injection. In this manner I have seldom used more than *one* injection, and in cases where extensive sinuses exist, *two* are all-sufficient.

The advantage over the old method of destroying the skin with

the potassa fusa, or excising with the knife, and waiting the tedious process of granulation, must be apparent, besides obviating the unpleasantness of confinement to bed.

Case of Suffocation. Reported by G. R. B. HORNER, M. D., Surgeon U. S. N.

Sunday, June 10th, in the morning, Mary Berry, a girl about seven years old, residing in the south-eastern part of Philadelphia, put the top of a broken glass decanter-stopper into her mouth. The top was globular, and about two inches around. From some unknown cause she took a long inspiration, and, as she says, sucked it down her throat. It lodged at the entrance of the œsophagus, and so obstructed that or the glottis, that she immediately became strangled. Her mother and others about her in vain endeavored to relieve her; an apothecary was sent for, and could not do so. Luckily, Mr. Isaac Hugg, an ingenious, long, slender-fingered tailor, living opposite, in Second street, heard the alarm, ran to the poor child's relief, and understanding what had happened, thrust his fingers into her throat, but at first could not feel the stopper. He tried a second time: after raising her feet upwards, her head downwards, and over his knees, and after getting a finger under a projecting point of the broken surface of the stopper, succeeded in throwing it upon the floor. By this time the child was insensible, but on the introduction of his fingers, gagged, assisted his efforts, and was resuscitated, though pronounced dead by the druggist, deceived perhaps by the lividness of her face, and other fatal signs. Of the above facts I was informed while passing her residence at the time of the accident, and by subsequent enquiry.

BIBLIOGRAPHICAL NOTICES.

On Diseases of the Liver. By GEORGE BUDD, M. D., F. R. S., Professor of Medicine in King's College, London, etc. *Second American, from the last and improved London edition. With Coloured Plates and Wood Cuts.* Philadelphia. Blanchard & Lea. 1853. pp. 468.

The lapse of seven years between the publication of the first and second editions of this valuable work, has imposed upon the author the necessity of more than usual revision, modification, and addition; for, certainly, upon no subject within this period, has more new light been thrown, than upon the anatomical structure and functions of the liver, and the chemical composition of its chief secretion.

Dr. Budd, in his voluminous introduction to this edition, presents a lucid and detailed account of the recent discoveries in relation to the intimate structure of the liver, which have led him, in many particulars, to modify his previously expressed opinions on this subject. Among the late observations of anatomists upon which he has drawn, in his minute anatomy of this viscus, we may mention those of our countryman, Dr. Leidy.

As regards the composition of the biliary secretion, the improved analysis on this point since Dr. Budd's first edition have of course led him to very considerable modification of the account which he then gave of the constituents of the bile. After presenting the more recent views of prominent chemists on this point, the author adopts that of Strecker, whose "researches have shown that the biliary matter, which is (as shown by previous chemists) combined with the soda, may be resolved into two acids: both containing nitrogen, and one of them containing sulphur."

The highly important and interesting discoveries of M. Bernard, as regards the formation of diabetic sugar in the blood, during its passage from the liver, receive, we need hardly say, the notice to which they are so well entitled at the hands of Dr. Budd. While admitting, however, the demonstration of M. Bernard, that sugar is formed habitually in the liver, "it seems improbable, he thinks, that the production of a substance which

is to be had at so cheap a rate in nature, is an essential office of this organ, at least in herbivorous animals; for not only do these animals find sugar in considerable quantities ready made in their food, but a great part of the starch they consume is also speedily converted into sugar by the action of the salivary and pancreatic juices. It seems more probable that the sugar formed in the liver is incidental and complementary to some more important product."

The subject-proper of the book, the Diseases of the Liver, is illustrated in this edition, by numerous additional observations and cases which have since occurred in the practice of the author. We are unable to notice them verbatim; but we can most unhesitatingly recommend the work as a most complete and learned treatise on this important subject,—a subject of the highest interest to the numerous class of our readers, whose range of practice is within the more southern portions of our country.

Elements of Health, and Principles of Female Hygiene. By E. J. Tilt, M. D., Physician to the Farrington General Dispensary, &c., &c. Philadelphia. Lindsay and Blakiston. 1853.

Dr. Tilt, in the elegant little volume before us, has done for woman, what Johnson, Combe, Mayo, Thomson, and Southwood Smith had previously done for man, and has presented to the profession, as well as to the general reader, an excellent treatise on the general hygienic treatment of females from infancy to old age. We know not when we have read a book of similar design, which, upon the whole, has pleased us so much as this one. Its principles are sound, philosophical, and intelligible to all. We should be glad to see it in the hands of every mother, and believe that much evil might be averted were the contents generally and carefully studied. We wish that space were afforded us to present an analysis of it to our readers. We must content ourselves, however, with a hearty commendation of it to them, with the conviction that they cannot fail to derive benefit from its teaching, and from the extended experience of its author.

Medical Jurisprudence. By ALFRED TAYLOR, M. D., F. R. S., &c., &c. *Third American, from the Fourth London edition.* Edited, with additions, by ED. HARTSHORNE, M. D., &c., &c. Philada. Blanchard & Lea. 1853.

The author's belief, that this volume has already found a wide circulation, not only among his own profession, but gentlemen practising at the bar, is a well-founded one. Certain it is, that no similar book, with the exception of Beck's, has been more popular in this country. Dr. Taylor has displayed great diligence and fidelity in accumulating all the valuable matter presented by journals and other sources, since the previous edition, while the American editor has introduced all the important facts and cases that have occurred in this country. The present edition, therefore, we think, fully represents the existing state of knowledge both abroad and at home.

Principles of Medicine: comprising General Pathology and Therapeutics, and a brief general view of Etiology, Nosology, Semeiology, Diagnosis, Prognosis, and Hygienia. Edited, with additions, by M. CLYMER, M. D., &c. *Fourth American edition, revised.* Philada. Blanchard & Lea.

Another new edition of this popular, we may say now, standard work, evidences a desire on the part of the profession to become familiar with *principles*, and we know no work to which we can, with more safety, direct the student and practitioner than this. Although no new English edition has recently appeared, the American reprint has been carefully revised and posted by the editor, and much additional matter added. It should be on the shelves of every professional library.

On the Nature and Treatment of the Deformities of the Human Frame: Being a Course of Lectures delivered at the Royal Orthopœdic Hospital, in 1843. By W. J. LITTLE, M. D., Physician to the London Hospital, etc., etc. London. Longman, Brown, Green & Longmans. 1853. pp. 412.

We are indebted for this valuable monograph, certainly the

most complete on the subject in the language, to the London publisher. The author considers it, as it is in some sense, a third edition of his *Treatise on the Nature and Treatment of Club-Foot*, published fourteen years since: and it consists in the main of a reprint of his Lectures on the subject, published originally in the London Lancet, in 1843. Dr. Little has, however, interwoven with the Lectures the results of his additional experience, and has adapted the work to "the altered position of the pathology and treatment of distortions at the present period, compared with its state when Stromeyer commenced his labors."

The subjects are, 1. Deformities in General; 2. Deformities from Wounds and Diseases of Joints, Accidents, Rheumatism, &c.; 3. Deformities from Spasm, Paralysis, Burns, Habitual Retention in One Position; 4. Deformities from Rickets, Weakness, and Curvatures of Bones; 5. Congenital Distortions, Club-Foot, Club-Hand, &c.; 6. Congenital Malformations, Monstrosities; 7. Distortions of the Spine.

This brief outline of the contents of this very useful and practical work, is perhaps a sufficient notice of it on the present occasion, as it has been already substantially for a considerable time before the profession. We shall offer our readers, however, a detailed extract from its pages, on a subject of recent interest, the treatment of anchylosis by forced extension, which is very judiciously treated by Dr. Little.

"The art of surgery has, however, recently received an invaluable addition to its means of usefulness, by the discovery of the anæsthetic properties of ether and chloroform; and orthopædic practitioners have not been slow in availing themselves of the assistance these means are calculated to render in the cure of deformities. Hence the employment of forcible extension with the aid of chloroform or ether. By chloroformisation, the two great obstacles to the employment of force adequate to straighten or bend a contracted limb,—namely, pain and voluntary muscular resistance,—are removed. As soon as these impediments disappear, the hands of the single operator, and his single mind, applied to the parts, encounter the physical resistance only of the deformed parts; comparatively gentle manipulations now acquaint him with the nature and amount of difficulty; he can feel his way in the application of greater force; feels and perceives the resistance of parts successively overcome, in an anatomical order; if greater rigidity still oppose, a few movements of the joint backwards and forwards prepare the way for a

more extensive yielding; and often the practitioner has the satisfaction of being able to effect every natural movement of the joint, and satisfy himself that a cure is obtainable.

"Chloroformisation, with manipulations, and the use of a certain degree of force, is often of great service as a means of diagnosis; by it the practitioner is enabled to ascertain what proportion of the deformity is due to shortening of soft parts, and how much mischief the articular surfaces may have undergone. He may have reason to conclude, from the amount or nature of the resistance, and the change of articular surfaces, that restoration of the form and functions of the part is impracticable, and thus save much time, which without chloroform might have been uselessly expended in an attempt to straighten the part.

"After straightening or bending the limb, as the case may have required, by means of this forcible procedure, the part should be lightly secured in a retentive instrument or upon a common splint, adjusted so as to maintain the position more favorable than that which obtained before the operation, though not in the new position, *i. e.*, the entirely straight or bent position into which the hands of the surgeon may have brought it. For, as soon as the effect of the chloroform upon the sensorial system disappears, the patient will arouse to the conviction of the violence which may have been employed, the part may be acutely painful, and incapable of sustaining the pressure of a tight bandage or ligature.

"The author has usually contented himself with the increased knowledge of the nature of the case, with the satisfaction of knowing that the part could be improved in form and function, and that as the resting parts had once yielded, that they would afterwards oppose less resistance to cure; whether the means subsequently employed should be simple manipulations, the use of mechanical apparatus, or repeated administrations of chloroform, and 'forcible extension.' The surgeon who should attempt the forcible binding down of a long-deformed limb immediately after 'forcible extension,' would betray a lamentable ignorence of the pathological condition of the living parts in the immediate vicinity and within the deceased articulation. Although the muscular structures may have yielded under chloroform, and indurated fascise and old adhesions may have been overcome by tearing, it will be remembered, that much adaptation on the part of nerves, blood-vessels, and absorbents to the altered position of structures needs to be accomplished. The author has found that, by taking moderate means of retaining as much improvement after the forcible extension as can be borne by the sufferer, by unsparing use of lotions of spirits of wine, no inflammation of joints thus straightened has supervened. He has witnessed no untoward accident; and, by employing the ordinary means of gradual extension, and repeating once or twice the chloroform, and complete extension while the patient lay under its influence, he has restored cases, the relief of which would have required many months of ordinary treatment, or would otherwise have constituted very mediocre cures."

The work is illustrated by upwards of 160 well executed engravings and diagrams.

THE MEDICAL EXAMINER.

PHILADELPHIA, SEPTEMBER, 1853.

YELLOW FEVER IN PHILADELPHIA.

Since the August number of the Examiner went to press, our community has been startled by an unexpected visit from the yellow fever, which for upwards of thirty years has been an entire stranger to our city, so proverbial for its cleanliness and health.

Fortunately for Philadelphia, this dread enemy no sooner showed its malignant foot-prints on our borders, than the Board of Health, in the exercise of their prerogative, and with a commendable energy, instituted a most rigid investigation in the neighborhood where the first case appeared, and with the sanitary besom swept away, it is to be hoped, whatever nuisances were fruitful in concealing and propagating that poisonous *materiel*, be it malaria, unhealthy gases, animalcula, fungi, or what not, which are ever so productive of epidemics.

To this prompt and energetic action, coupled with the efficient municipal arrangements for preserving the cleanliness of the city, in its streets, gutters, and sewers, together with the abundant supply of water, must be attributed in a great measure the present arrest of the disease, and hence the preservation of the health of its 450,000 inhabitants, from the inroads of a fearful pestilence.

Thus far the fever has been confined to a very limited district, embracing an area of not more than 600 yards in length by 200 in breadth, bounded by Union street on the north, Second street on the west, Almond street on the south, and the Delaware front on the east, a neighborhood by no means densely peopled; but in many places the houses are confined and filthy, the Delaware avenue defective in surface drainage, the cellars in the vicinity damp and subject to an overflow during the flood and ebb of the tide waters of the Delaware, rendering the neighborhood insalubrious from excessive moisture, and the exhalation of noxious vapors, the product of animal and vegetable decomposition.

The origin of this fever may be involved in some doubt and obscurity. Whether from a specific germ imported in the barque Mandarin, or the product of her putrid bilge water, or of spontaneous birth in that particular locality where the irruption first manifested itself, still remains a perplexing question to solve. One circumstance connected with its history is clear, viz: that no yellow or malignant fever, or any epidemic, pervaded our city prior to the arrival of the barque Mandarin. This unfortunate vessel arrived here, all well, from Cienfuegos, Cuba, after a passage of seventeen days, on the 13th of July last, and hauled to at a wharf between Lombard and South streets. Six days after, the first outbreak of fever of a malignant type showed itself in that immediate vicinity. From this point it spread itself in about one month over the district above named.

It may be proper here to state that the Mandarin came from a port in the West Indies, where "a few cases of small pox and fever" prevailed; that she lost two of her crew from "fever" on the passage; that her bilge water was in a very foul condition, and notwithstanding she was detained at the Lazaretto, for cleansing purposes, yet, after opening her hatches and discharging her cargo, consisting of sugar and molasses, the bilge water was exceedingly offensive, and before she was removed by the Board of Health, the stench became intolerable.

During the two weeks that this vessel remained in the vicinity of South street wharf, the mean of the thermometer was 79½°.

As already hinted, the first case of suspicious fever happened on the 19th of July, six days after the arrival of the Mandarin, in the person of Joseph Sharp, a young and healthy carman, at South street ferry. On the next day, the 20th, five cases were reported, on the 21st four cases, on the 22d one case, on the 23d two, on the 25th three, on the 26th one, on the 27th one, on the 29th three, on the 30th two, on the 6th of August one, on the 9th two, on the 10th one, and so on up to the 20th—all of them, with the exception of the 21st, being clearly and distinctly traced as having their origin either by a residence in or a direct communication with the infected district.

The following is a list of the cases, in the order of their occurrence, up to the 20th of August:

	Date of attack.	Died.
1. Joseph Sharp	July 19th	July 26th.
2. Geo. Robinson	" 20th	" 23d.
3. Thos. D. Koehler	" "	" 27th.
4. G. W. Kerkeslager	" "	" 25th.
5. Mrs. Kerkeslager	" "	" 26th.
6. Charles Burrows	" "	" 22d.

		Date of attack.	Died.	
7.	Fred. H. Kellog	July 21st	July 23d.	
8.	Fanny Martin	" 21st	" 26th.	
9.	J. M. G. Koehler	" "		Recovered.
10.	Paulina Koehler	" "		"
11.	Honora Stanton	" 22d	July 27th.	
12.	Silas Green	" 23d		Recovered.
13.	R. N. Campbell	" "		"
14.	John Shellcott	" 25th	July 30th.	
15.	Rosanna McKean	" "	" "	
16.	John White	" "		Recovered.
17.	David Murray	" 26th		"
18.	James Markley	" 27th		"
19.	James Clements	" 29th	Aug. 1st.	
20.	Mrs. Mullen	" "	" 5th.	
21.	John Haslett	" 29	" 2d.	
22.	Mary Bulger	" 30th	" 3d.	
23.	Ann Jane Stewart	" "	" 13th.	
24.	Mary Williams	Aug. 6th	" 12th.	
25.	John S. Williams	" 9th	" "	
26.	Betsey Stephens	" "	" 13th.	
27.	Ellen Boland	" 10th	" 15th.	
28.	James Riley	" 13th	" 15th.	
29.	Bridget Tibley	" 14th	" 22d.	
30.	Oliver Pitcher	" 15th	" 18th.	
31.	James Genton	" 15th	" 27th.	
32.	Mary Carrigan	" 17th	" 19th.	
33.	" " (daughter)	" "	" 20th.	
34.	Mary Turner	" 18th	" "	
35.	John Brennock	" "	" 19th.	
36.	John Carrigan	" 20th	" 22d.	
37.	Catharine Handson	"	" 22d.	
38.	Edward Carrigan			

Of the above 38 cases, 31 of them died, 24 of which were accompanied with black vomit.

The 21st case, of John Haslett, the drayman, cannot be traced to any portion of the infected district, although he stood on Chesnut street wharf, and was engaged daily in hauling goods along the eastern front of the city, and may perchance have been within the range of infection.

In enumerating all the facts in connexion with the appearance of this fever, it must not be overlooked, that at the dock fronting South street there is the open mouth of one of the sewers of the city, belching forth at all times its decomposing compounds of filth, which, when the tide is low, being exposed, must contaminate the immediate atmosphere with foul and unwholesome exhalations.

The question may be agitated by some one who has not witnessed a single case of this disease, "Is it yellow fever?" In answer, we would reply, that the most reliable evidence has been furnished of its being genuine yellow fever. Prof. Samuel Jackson saw two of Dr. Gegan's cases, and had one of his own; in all of them he recognized the same enemy that visited our city in 1820. Other gentlemen, who had seen the disease in the South, and in the West Indies, at once regarded the fever to be similar in all its features.

It was ushered in by intense headache, pains in the loins and extremities, distress at the epigastrium, nausea and vomiting, tongue soft and white, with red edges, eyes of a pink or yellow color, skin assuming a yellow tinge, in some instances petechiæ; the fever lasting for three and sometimes four days, and then remitting; the patient feeling better, and in some cases says he is well; but in a few hours, prostration comes on rapidly, with vomiting of black matter, in which, under the microscope, blood corpuscles have been discovered; the ejections from the bowels are thin, watery and dark in their appearance, with hemorrhages. In the fatal cases, no reaction of the system comes on, and the patient dies on the third, fourth or fifth day, and almost invariably the whole surface of the body becomes of a deep jaundice color.

A post mortem, where it has been made, reveals the usual appearances found after death, in those who have died of yellow fever, viz.—softening of the mucous membrane of stomach with patches of inflammation, the liver contracted and invariably of a light yellow or box wood color. In several instances the peculiar black fluid, called black vomit, was found in the stomach or intestines.

Where reaction follows the remission of the fever, the recovery has generally been rapid. In Dr. Jackson's case, the 22d, there was no steady reaction after the third day of attack, and no black vomit, while the patient lingered until the fourteenth day and then died. The yellow skin and pink eye, with oppression and great distress over the epigastrium and heart, were prominent symptoms in this case.

Besides the cases above numerated, there have been several deaths from fever, in the immediate vicinity of the infected district, which bore some slight resemblance to those cases classed under the head of Yellow Fever; but as the disease has not as yet assumed an epidemic form, it is presumed they were no more than ordinary instances of bilious fever, which usually makes its appearance about this period of the year.

We have endeavored to obtain a list of all the well authenticated cases which have occurred, and we believe we have succeeded in securing the most reliable information on this interesting topic. If there have been

other cases, they were kept from the public, and therefore we had no access to them.

Since the above was in type, a few more cases have occurred, all of which, with a few exceptions, may be traced to that section of the city where the disease first made its appearance.

We may congratulate ourselves that no epidemic is at this time prevalent in our city. The cases of fever that are to be found, are few in number, and are beginning to assume the ordinary bilious character of our Autumnal diseases.

Indeed our city is healthy; comparing the weekly statement of deaths with those of last year, they will be found rather under, than above the mortality of the same season in 1852.

[We are indebted for the above very interesting account of the recent cases of yellow fever in this city, to our esteemed correspondent, Dr. WILSON JEWELL. A more detailed notice of the earlier of these cases was read by Dr. Jewell before the August meeting of the College of Physicians, and will appear in the Transactions of that body.—EDS. EXAMINER.]

It will be seen, from the list of Books received, prefixed to the present number, that an unusual amount of new publications has been, within a short period, placed upon our table. Our limits prevent an immediate notice of all, but we hope to be able to do them justice in the October number.

MEDICAL NEWS.

[The following beautiful tribute to Dr. CHAPMAN was addressed to him many years ago, by his early friend, Dr. J. K. MITCHELL, who afterwards accepted and still worthily fills in the Jefferson Medical College, the same chair which was illustrated for so long a period by Dr. Chapman in the University of Pennsylvania. Its republication, at the present time, will, we are satisfied, be interesting to our readers.]

DEDICATED TO N. CHAPMAN, M. D.

Dear Doctor, though I hae the will,
I fear I want poetic skill
To do ye muckle credit;
But yet I'll imp my youthfu' wing,
And o' my guid preceptor sing,
Though ye y'ersel may dread it.

I've aften wished for Burns's pen,
And thochts frae Ramsay's fairy glen,
To do ye fitting honor,
But tak the will and no the deed,
My muse, the jade, awa will speed,
Sae I maun e'en get on her.

Ah! weel I mind when first I saw
Ye laying down the morbid law
O' nature to the student;
To dry detail and dusty lore,
Brocht frae y'er inexhausted store,
A new enchantment you lent.

Frae worthies o' the aulden time,
To those wha yet were i' their prime,
Ye drew y'er rich resources;
And last, not least, frae y'er ain sel,
Baith thochts and words o' magic spell
Adorn'd y'er ripe discourses.

Wi' easy grace and potent sense,
Clear order, a' without pretence,
And learning without show, sir,
Ye charm'd the eye, and pleas'd the ear,
And made y'er thochts sae richly clear,
The darkest truth did glow, sir.

But faith, I scarce believ'd my eyes;
Ye took me, sir, wi' sair surprise,
When mang y'er friends I saw ye
Let loose the wit by science chain'd—
Humor that nae ane ever pain'd—
Oh! thus I'd like to draw ye!

They little ken ye wha hae known
Y'er science and y'er skill alone,
Though they are mair than ample;
The racy pun, rich repartee,
The gushing joke frae malice free,
Wad na complete the sample.—

But better far, a heart that ne'er
Did o'er a human ill forbear
To heave a feeling sigh,
That readily forgave a foe,
And never dealt a jealous blow,
In keenest rivalry.

Mair I might say, but this I fear
E'en frae a friend ye'll hardly bear,
Sae I'll nae mair offend ye;
Though if ae man beside y'ersel
Says that the truth I dinna tell,
That man has never kenn'd ye.

J. K. MITCHELL.

COMPARATIVE HEALTHINESS OF ENGLAND, FRANCE, PRUSSIA, &c., —The annual rate of mortality in England may be best understood by saying that there are 46 persons living to 1 dead. That is, the mortality as 1 in 46. In 1841, the annual mortality per cent. was 2207, or 1 in 45. In France there were 42 living to 1 death; in Prussia, 38; in Austria, 33; and in Russia, 1 person in 28 died annually. In the latter country, the mortality per cent. is 3590, or in other terms, out of every 100,000 Russians living, 3590 died in one year; while out of ever 100,000 British living, only 2507 died in the same period. In several Italian cities the annual mortality of the inhabitants is from 3 to 4 per cent.. In the city of Naples, which has been shown to be one of the unhealthiest in Europe, it appears that 4046 persons died out of every 100,000 of its inhabitants. From these facts, it is evident that there is a lower rate of mortality among the inhabitants of this country than in either of those enumerated, and that in some instances the mortality falls little short of one-half the same as existing in less favored regions.—*Lancet.*

THE JENNER TESTIMONIAL.—It is fully determined to execute with every possible despatch the well-merited testimonial to the memory of a man whose discovery of vaccination has immortalized him. With that object subcriptions are being raised throughout every kingdom. The United States raised for that purpose 1600 dollars,—a larger sum than any other country subscribed.—*Ibid.*

ASIATIC CHOLERA IN COPENHAGEN.—A London daily paper states, "We have received information that this dreaded disease has re-appeared in an epidemic form in Copenhagen, where cases of it have ex-

isted, proving rapidly fatal ever since the middle of June. From that period the disease has been slowly but steadily increasing; and the official return for the 8th of the present month states that on that day there were 51 new cases and 18 deaths. From the first appearance of the disease, there have been registered in all 270 attacks and 142 deaths; so that this formidable pestilence, which for several months has been lingering in St. Petersburgh, has now approached to within less than 500 miles of the coast of Norfolk. On Tuesday last there were 53 new new cases of cholera, and 36 deaths. Since the 12th of June, 427 persons have been attacked, and 234 have died.—*Ibid.*

FRIGHTFUL MORTALITY IN CALCUTTA.—Owing to the great heat and the absence of rain, eleven hundred persons were carried off, at Calcutta, in the course of two days.—*Lancet,* from *Overland Athenæum.*

ROYAL ACKNOWLEDGMENT OF MEDICAL SERVICES.—On the 8th August last, her Majesty was graciously pleased to confer the honor of Knighthood upon Dr. John Forbes, and Dr. James L. Bardsley, of Manchester.—*Lancet.*

THE MEDICAL CHRONICLE, or Montreal Monthly Journal, edited by William Wright, M. D., and D. C. Mac Callum, M. D., made its debut in June last. It promises to be an interesting and spirited journal.

The first number of the MEDICAL REPORTER, a quarterly Journal, published under the direction of the Chester and Delaware County Medical Societies of Pennsylvania, was issued in July. The editorial committee consists of Drs. Wilmer Worthington, Isaac Thomas, and Jacob Price, of Chester county, and Drs. George Martin and John T. Huddleson, of Delaware county.

The Astley Cooper prize of £300 for the best Essay on the "Structure and Functions of the Human Spleen," has been awarded by the physicians and surgeons of Guy's Hospital to Henry Gray, Esq., F. R. S., Wilton-street, Grosvenor-square.

THE CHOLERA.—The Dutch Government have received the official notification from the Dutch Minister Plenipotentiary at Stockholm, that the Swedish Government have declared that the cholera prevails in Abo, Elsinore, St. Petersburg, Cronstadt, Narrva, Reval, Riga, and Copenhagen, and that the following places and territories are "suspected to be infected:"—All the Finnian harbors from Christianstadt inclusive to

the Russian frontiers; all the Russian ports of the Gulf of Finland and the Baltic, and the ports of Zealand. Copenhagen, July 31.—The cholera seems to have diminished here somewhat in intensity, as there are only 287 new cases, and 115 deaths. Up to the present time the 45th part of the population has been carried off by the malady. Our accounts from Copenhagen, up to the 4th instant, show the cholera to be somewhat on the decrease, the new cases seldom exceeding 150 per day. The whole number at present announced amounts to 5996, with 3219 deaths. It is to be observed, however, that now that the disease has attacked the middle-classes, who, for the most part, were treated at their own houses, the number of cases published would always be considerably under the truth.

THE CHOLERA.—The last news from Persia announces, that the cholera is making great ravages in Astraband, Mazraderam, and the desert of the Turcomans. In one of these provinces, the number of deaths amounted to 150 a day. The Shah and his Court had retired to Imama. To complete the distress, the towns of Shiraz and Surham had been nearly destroyed by earthquakes, the Zaindowod was dried up, so that, from its muddy bed, innumerable bands of grasshoppers proceeded, destroying everything in their progress.

DEATH OF DR. PEREIRA.—We are permitted to extract the following reference to the death of this distinguished physician from a private letter to Dr. Duck of this city. The writer says: "Poor Pereira, his loss is felt by all; he was buried at the Kensalgreen cemetery, and was followed by the whole school of the London Hospital and also by between thirty and forty practitioners, many of them, including myself, coming a distance of between six and seven miles. Dr. Billing kindly took me in his carriage coming home, when I had the advantage of hearing his opinion as to the cause of death. Dr. B. thinks that when Dr. Pereira slipped on the back stair case of the College of Surgeons, in addition to the rupture of the tendon of the left quadriceps extensor femoris, he also ruptured the two inner coats of one of the sinuses, at the origin of the aorta, and that on exerting himself to relieve his attendants while lifting him into bed, a fortnight afterwards, he ruptured the remaining coat and died from internal hemorrhage. His friends objected to a post-mortem examination, and it was not urged. A committee of four or five physicians are completing the second part of the 2d volume of the learned Doctor's Materia Medica, which Dr. Billing says

is a perfect encyclopedia. The greater part was already finished and in the press."—*N. W. Journal, August.*

Death of William Beaumont, M. D.—He died at his residence in St. Louis, on the 25th of April last, in the 68th year of his age. Dr. Beaumont was a native of Lebanon, Connecticut, where he was born in 1785. In 1812, after studying medicine at St. Albans, Vermont, for two years, he joined the Sixth Infantry, with the appointment of Assistant-Surgeon. For more than twenty years he was a member of the medical staff of the regular army, being stationed at various points on the northern frontier, and through the war of 1812, with distinction—being present, among other occasions of interest, at the capture of Fort George, in May, 1813. In 1830, he was stationed at Jefferson Barracks, and afterwards in the Arsenal at St. Louis, taking up his residence in this city about 1834. Two or three years later he resigned from the army, and subsequently has resided constantly in St. Louis, enjoying an extensive practice and high professional reputation up to the period of his late illness.

Dr. Beaumont is widely and most honorably known in the literature of our profession by his "Physiology of Digestion and Experiments on the Gastric Juice"—based on and containing an account of experiments conducted by himself upon a Canadian (Alexis St. Martin,) whom he attended at Michilimackinac, 1825. The work has been reprinted in Great Britain, France, and Germany, with the highest commendations from the profession, and has become an acknowledged authority in matters where speculation had hitherto taken the place of observation.

Dr. Beaumont had lived in St. Louis for many years, engaged in arduous professional duties, and wherever he was known, it was as the kind-hearted, generous gentleman. In his social relations, he was most happy, diffusing at all times cheerfulness and contentment to those around him.—*N. Y. Journ. Med.*

Death of G. W. Richards, M. D.—Dr. Richards died at Dubuque, Ia., on the 22d of April, aged 53 years. He was for a short time connected with the Rush Medical College in Chicago, as one of its Professors, and afterwards became Professor of the Theory and Practice of Medicine, in the Medical College at La Porte, Ind. At a later period, he assisted in organizing a Medical School at Rock Island, and but two weeks before his death, was elected President of the Northwestern Medical Society, organized at Dubuque.—*Ibid.*

Death of Charles Caldwell, M. D.—From the Louisville (Ky.) Courier, we copy the following synopsis of the principal events in the life of Dr. Caldwell, whose decease took place in July last, together with some just comments on the literary and scientific character of that remarkable man.—"He was about ninety years of age, and probably the oldest physician in the United States, and enjoyed the greatest celebrity as a medical writer and teacher. He did more than any one to enlighten the public and the profession on the origin of yellow fever, and clearly illustrated the absurdity of quarantines. Some years before the Asiatic cholera invaded Europe as an epidemic, Prof. Caldwell predicted that in one respect cholera would prove a blessing to mankind, by teaching the worthlessness of quarantine regulations, and the vital necessity of attention to all the laws of sanitary science; and this prediction, as full and clear as the history of the epidemic can be made now, has been verified in every particular. This prophetic prediction of the venerable teacher was recently made the conclusion of an invaluable report on cholera, published by the British Parliament.

"At the commencement of his medical career, Prof. Caldwell settled in Philadelphia, and won great distinction. Among the writers and investigators of that period, Dr. Caldwell was the greatest. He towered above his contemporaries, as a tall monument springs from the plain.

"In addition to Dr. Caldwell's luminous and voluminous labors upon all the important questions of medical science, all subjects of public interest felt the benefit of his intellect. His papers on Quarantines, Malaria, and Temperaments, are among the best in the English language on those topics. His treatises on Physical Education, on the Unity of the Human Race, and on Phrenology, have rarely been equalled. Every thing he touched he adorned. We doubt whether the English language contains a biographical sketch equal to Dr. Caldwell's tribute to Fisher Ames, published in the American edition of Rees's Encyclopedia. A recent edition of his work on the Unity of the Human Race, displays a remarkable instance of intellectual vigor in one who had passed that period at which mental power usually begins to falter. In that work Dr. Caldwell reviewed a recent work on the Races by Dr. Knox, of England, and the criticism is one of the ablest and most conclusive we know of. Quite recently, Dr. Caldwell published a paper in the Western Journal of Medicine and Surgery on Liebig's theory of Animal Heat; and the distinguished Professor of Giessen has not received such a blow from any other quarter. But time and space would fail us if we were to attempt an enumeration in this paper of the works of Professor Caldwell.

"The great reputation of Dr. Caldwell as a medical scholar, teacher

and writer, induced the friends of western enterprise in medical teachings, to invite him, about 1818, to a chair in the Transylvania School of Medicine. He accepted the trust, and entered upon the discharge of its duties with a zeal, intelligence and power that were determined to know no such thing as failure. He was the bright particular star of Transylvania, and during his connection with the institution it prospered. The labors of himself and of his colleagues, who caught inspiration from his example, made the Transylvania School of Medicine equal to any in the Union, and he had much to do with its proud pre-eminence.

"When he discovered that the spirit of the age demanded means for clinical instruction, and a larger field for medical observation than a village could furnish, he promptly entered into arrangements for transferring the Transylvania School to this city. Upon the failure of that attempt, he entered zealously into the project for establishing a school of medicine in Louisville, and by his labors, talents and eloquence, the project was forwarded. And to the same great powers the school was mainly indebted for its remarkable success.

"Dr. Caldwell was one of the most temperate men we have ever known. His science enabled him to keep a true sentinelship over his appetites, and the result was an exceedingly long life, far beyond that allotted to man by the royal Psalmist, with an almost entire exemption from sickness. Even in the closing scenes of life, disease did not invade his frame. He was nearly free from physical suffering; all the functions of his system were as well performed on his death-bed as during his highest health, and his mind was clear to the last. His life and death are impressive commentaries upon the truth of physiological doctrines which he taught for half a century, and by which he regulated his life and ordered its last scenes."

MEDICAL INSTITUTIONS OF BERLIN. By W. H. HINGSTON, M. D., L.R.C.S. Ed., Honorary and Corresponding Member of the German Medical Society of Paris.—It is often a question as to which of the medical schools of Germany holds the highest rank. The question is one of importance, as it has frequently to decide or regulate the time to be spent in each by those seeking professional education; yet is it one which cannot be answered generally or definitely. Thus, Prague and Vienna have long held pre-eminence in midwifery. More recently medical pathology is a branch which has been cultivated with great success in the latter. Physiology has made rapid strides in Berlin, Wurtzburg, and Bonn; Giessen has advanced chemical science, &c., &c.; but when

speaking of surgery alone, the question is divested of most of its difficulty.

In this department of science, Berlin has for some time stood pre-eminent, and still claims the foremost rank. During the residence here of Graeffe, surgeons and students from all parts of the continent, and many from Britain and America, were attracted to the Prussian capital. His world-renowned successor, Dieffenbach, added new lustre to the chair (already famous) until death removed him also from the scene of his usefulness and success. It was here tenotomy was first extensively and and successfully practised.* It was here also rhino-plasty was first given to the world. Graeffe's success in practice was very great. Dieffenbach's memory is still fondly cherished by the great mass of the people. Indeed it would be difficult to conceive greater affection for one nearly four years dead. The rich speak of him in terms of fondness, respect, and praise; the poor mention his name with reverence. Like John Hunter, his death was sudden and unexpected, and took place in the theatre of his greatest usefulness. One day when seated on a sofa, observing a student making an examination of a patient, he quietly expired. He was attended to his final resting-place by thousands. His requiem was the prayers and lamentations of those to whose comfort he had ministered. Dieffenbach was succeeded by Langenbeck; but I shall mention the present surgeons in connexion with the various institutions to which they belong.

The University.—A very fine building, built by Fred. Wm. III. opened in 1810, when, by order of the Prussian government, or rather the king, the University was removed from Frankfort-on-the-Oder to its present situation—Berlin. At first the number of students who were attracted to the Prussian capital was not very great, for although professors of acknowledged ability were here to be met with, yet the advantages afforded to military over civil students proved extremely distasteful to the latter, and prevented many from attending its sessions.† By a wiser policy of government, by gradually yielding to the wishes of the people, and by granting to civilians all the privileges they accorded to others, the University began to flourish. At the present moment it

* Tenotomy (by subcutaneous section) was first practised by Stromeyer of Kiel; but to Dieffenbach is due the credit of having brought it prominently before the British public.

† These remarks apply only to students of medicine. On those studying arts, law, or divinity, were placed no restrictions, for such are not usually educated for the army.

numbers 2200 matriculated students; of these about two-ninths are medical.

There is no school in Germany where so many students are collected together. Prague, the oldest, has 1272; Munich, 1957; Bonn, 866; Wurtzburg, 722. It would occupy too much space to enumerate all the German universities, amounting to twenty-four, and their statistics. I have mentioned these merely to show the flourishing condition of the one about which I am writing. Labor is there divided among the various professors in their several departments. In theology there are five ordinary, and four extraordinary professors, besides two *privatim docentes;* In law, nine ordinary, four extraordinary, and three *privatim docentes.* In the department of medicine there are eleven ordinary, six extraordinary, and nineteen *privatim docentes.* In philosophy twenty-seven ordinary, twenty-nine extraordinary, and thirty-one *privatim docentes.* In modern languages five.

The largest building for the relief of the sick is the Charité. It does not belong to the University. It was built by Fred. Wm. I. entirely for the education of surgeons for the Prussian army. It continued as such till 1810, when the University was brought from Frankfort-on-the-Oder to Berlin. Previous to that time there were professors of the Military Academy, who gave lectures to young men studying for the army. In 1810 the professors of the University were allowed wards for their clinique, and students then matriculated. In 1848 government made still greater concessions, by permitting civilians to become assistants to the professors in one medical clinique. The Charité, governed by two directors, one medical and one administrative, is divided into old and new. In all, it contains 900 beds, but could accommodate nearly double that number in urgent circumstances. The new contains all the syphilitic patients, insane persons, and prisoners, and also those sent from the prisons. The old contains medical, surgical, and obstetrical cases, and children.

From the medical wards, four are selected for the clinique, two male and two female, one for each professor. From the surgical are taken four wards for clinique, two of which are for ophthalmic surgery. These are attended by the same professor. Drs. Schoenbein and Wolff are the professors of medicine. The former, although pretty well advanced in years, is still active. From œdema glottidis, or some other affection of the throat, he is with difficulty understood. Strangers to the language or those who do not understand it thoroughly, will derive no advantage from attending his instructions, as a large portion even of his own countrymen find great difficulty in following him. His therapeutics, however,

are excellent. He has been the king's physician for years, and is highly esteemed by the profession. A work appeared many years ago, under the title of "Therapeia von Schoenbein," but he denied the authorship. I believe some students had taken notes of his lectures, and published them in a continuous form. His assistant, Dr. Traube, devotes several hours a day to giving instructions on auscultation and percussion. He has written many excellent papers; one in particular, on "Critical Days," is highly valuable. Inenken is the professor of surgery. High praise cannot be bestowed either on his operations or after-treatment; tedious in the former, meddlesome in the latter. He has been rather unsuccessful in the administration of chloroform. *On dit* that he has lost seven patients in this way. As it is an *on dit*, it might be well to take it *cum grano salis*. I saw a patient in January last, from whom he was removing the orbit, expire on the table. Inenken attributed the death to the shock of the operation, as he had done on previous occasions. This theory he has endeavored to maintain publicly, in opposition to Langenbeck, but much against the notions of the profession generally. As an oculist, Inenken holds, and deservedly too, a very high rank. He operates on the eye with care, dexterity, and precision. His diagnosis is almost infallible, his after-treatment good. He still holds to the old operation for cataract—the low incision. In this respect I believe he stands alone.

The obstetrical department, by a very unwise and prejudicial arrangement, is open to students only in the summer season, and to midwives in the winter. There are but thirty beds, which are seldom fully occupied. About 400 births take place in the year. Berlin makes no pretensions to midwifery; her claims are more easily substantiated in consequence. Young military surgeons are the resident accoucheurs in this branch.

Dr. Simon has the charge of the syphilitic patients. He is also lecturer on syphilis and diseases of the skin in the University. His works on those subjects bear evidence of considerable research. The females in the syphilitic wards are examined three times a week, the men twice. Those who have witnessed the examination of females in the hospitals of Britain, might be somewhat shocked at the manner in which patients are required to mount the steps, and uncover their person from the abdomen downwards. This is both extremely indecent and demoralising, the more so as it is unnecessary.

Apart from the Charité, and in connexion with the University, are three cliniques for medicine, surgery, and midwifery. They are all supported by government, and consequently admit patients from all parts of

Prussia. Dr. Busch is the professor of midwifery. He is not much seen by the students, except at lecture. He has gained his laurels, and now seems to enjoy his *otium cum dignitate*. Besides these, there are polycliniques for each of these branches. Those patients who are not desirous of entering hospital, can be attended at their own houses by the students, and when necessary, by the assistants. In the hospital of the University about 300 births take place in the year; in the polyclinique between 800 and 900.

It was in the polyclinique in Ziegel Strasse that Graeffe gave instruction. It was here, also, where Dieffenbach held forth; and what is still more to the purpose, it is here that Langenbeck may be seen daily, with a large number of cases for consideration. In no clinique I have yet visited, have I seen so many operations as are here to be witnessed. The hospital is not a large one, but only such cases as demand operation are admitted. Almost every day, persons in the city and neighborhood are brought to be operated upon, and carried back again to their respective domiciles. It has been stated that there are more operations performed here than in any hospital on the Continent. Certainly Paris has nothing to equal it. The reputation of the operator draws to the capital persons from all parts of Prussia and surrounding duchies. As a lecturer and teacher, Langenbeck is considered superior to his predecessor. As I have not seen any similar treatment in British hospitals, I will occupy a few lines in speaking of anchylosis generally.

In the words of Cooper, anchylosis denotes an intimate union or growing together of two bones, which were naturally connected by a moveable kind of joint. In the true, the bones grow together so completely, that not the smallest degree of motion can take place, and the case is positively incurable. In false anchylosis the bones have not completely grown together, and their motion is only diminished, not destroyed. Anchylosis is generally looked upon as a favorable and in many cases a desirable termination of inflammation or ulceration. It is thought to be as near an approach to health as it is possible, under many circumstances, to attain; or in the words of Miller, it is a compromise between health and disease. Cooper remarks, "No attempt should ever be made to *cure*, though every possible attempt should often be made to *prevent* a true anchylosis." The exertion to prevent, he further adds, is not always proper, for "many diseases of joints may be said to terminate when anchylosis occurs."

With such authority before us, and the authority of many more I might quote, it would require no small amount of courage to interfere with what has been designated "a favorable termination," "a desirable

termination;" and a surgeon who would undo this wise provision of Nature, might be pronounced reckless and bold. I confess that such would have been my own opinion had I read and not seen the treatment—the successful treatment, of *true*, and in many cases long standing, anchylosis, by breaking up the callus. This mode of practice is not novel. It was tried many years ago in France, but the result of these experiments was such as to discourage others from repeating them. Violent inflammation of the joint, and the most disagreeable consequences, generally followed; and the patient was left in a worse condition than previous to those experiments. But the French erred greatly. Instead of breaking up the callus gradually and cautiously, they restored the perfect flexion and extension of the limb immediately, and then kept up the motion of the joint, in order to free the condyles of the abnormal adhesions. As already remarked, the consequences were frequently very serious. The majority of surgeons would not follow the example, and writers on surgery only mentioned this mode of treatment in order to caution the profession against adopting it.

The practice so successful under Langenbeck, and which has given rise to those remarks, consist in breaking up the callus certainly, but in a manner very different from that employed by Louvrier. The patient is placed upon his back, and chloroform administered until complete anæsthesia is induced; until, in fact, *the muscles cease to offer any resistance.* If the anchylosis be of the knee (the most favorable joint for the operation) an assistant, or assistants, fix the pelvis, and the surgeon commences gradual flexion, if the joint be in an extended state, or extension if in a flexed state. The force to be employed must be regulated by the surgeon himself. In cases of many years standing, the force required, as might be supposed, is considerable; sometimes the whole weight of the body is necessary, but it must always be applied with care. When the callus yields to the external force, the amount of flexion is preserved until the next trial, the limb being exercised, passively, during the interval. A great degree of flexion is not to be desired at once; and the more cautiously and patiently the limb is managed, the less danger of violent reaction, and the greater probability of success. Indeed, this constitutes the great difference between the treatment of Louvrier and that of Langenbeck, or between failure and success. When managed with due care, the inflammation set up is very trifling, indeed seldom sufficient to retard the cure. Frequently no reaction is perceptible. Every two or three days the patient is again subjected to the same treatment. Sometimes a couple of months are necessary to restore the function of the joint perfectly, but three or four weeks are frequently suffi

cient. Although many years may have elapsed between the occurrence of the anchylosis and the attempt at restoration, yet in most cases the callus may be broken up, and the integrity of the joint restored. It is absolutely requisite, however, that the patient should exhibit no tendency to scrofula, and this the more especially if the anchylosis be the result of scrofulous inflammation or ulceration.

From the want of exercise of the joint, the limb is usually much smaller than the sound one. Sometimes almost total atrophy of the muscles is the consequence, but a short time suffices to restore them to their original volume. In concluding these remarks, I feel perfectly justified in supporting the claims this mode of treatment has to be admitted among the regular operations of surgery.* And as anchylosis, as a result of disease of, or injury to the joint, is unfortunately of frequent occurrence, any mode of alleviating the subjects of it should obtain a fair trial, especially when supported by experiments.

In the same building in Ziegal Strasse, Romberg holds his clinique. He is particularly distinguished for his treatment of nervous affections. His admirable work on "Diseases of the Nervous System," said by some to be somewhat unintelligible, has been translated into English, and is no doubt familiar to many. There are several private institutions for the education of young men that have no support from government, the professors of which are recognised by the University as extra-academical professors, or *privatim docentes*. I will only mention those of excellence. In the Orthopædic Institution of Dr. Buehring, almost every kind of deformity may be seen, and an infinite variety of apparatus. A few months' attendance will suffice to show the most sceptical the great advantage which frequently attends the judicious employment of mechanical means for removal of deformity. I have there observed, and only there, curvatures of the spine in young girls, deformities of the femur, &c., brought back to their original condition, while, at the same time, the young patients were daily improving in health, and they have finally left the hospital with rosy cheeks and robust health. The Doctor confines them to the horizontal posture, only three or four hours daily. Some of his little patients have been with him twelve, and some eighteen months. Buehring has strongly advocated the bringing together by force of the two superior maxillaries in congenital absence of the hard palate. He

*I have devoted more time to this matter than I originally intended; but as it is an important one, and the mode of treatment peculiar to Berlin, I thought it entitled to more than a passing remark.

was the first to practise and recommend this operation. Dr. B. is a nephew of the late Dieffenbach, and edited his work on "Operative Surgery," which appeared shortly after his death.

Dr. von Graeffe has a clinique for diseases of the eye. A great collection of cases may be seen at almost any hour, but especially from nine to eleven A. M. He enters very fully, when occasion presents itself, into the physiology of the eye, and the laws of optics. I may mention the treatment of ulcerations of the cornea, by the solution of atropine, which I have seen applied almost daily, with the greatest success. It is not necessary to allude to all the remedies recommended. Nitrate of silver in substance, weak and strong solutions, and sugar of lead in powder, weak and saturated solutions, seem to be the favorites with the profession. Jacob, in his "Essay on the Morbid Anatomy of the Human Eye," p. 367, says that caustic sometimes becomes permanently fixed, and constitutes an indelible dark speck. The same author, p. 369, makes an equally grave charge against the use of acetate of lead. He says that the obstinate and intractable nature of some ulcers, whose surface presents an opaque white color, is due to the employment of the acetate of lead. He seems to think that the acetate is decomposed, and that a white precipitate is deposited in the ulcer, to which it adheres tenaciously, and in the healing becomes permanently and indelibly imbedded in the structure of the cornea. To atropine in solution there can be no such objection. It cannot leave any dark speck or precipitate to be imbedded. Whether it exerts a specific action on the ulcer, or acts indirectly through the capillaries, I cannot say; but certain it is, that ulcers have been found to heal under this treatment much more rapidly than under any other local application. I merely mention the fact, and leave it to others to determine its action. Dr. Graeffe employs it also in conjunctivitis. Dr. G. is son of Dr. G. whose name I have already mentioned. The money left by his father enables him to support an hospital at his own expense. His acquaintance with French and English, and his desire to impart instruction, by speaking in either language when necessary, renders him a favorite, and his clinique is much frequented by persons speaking these languages.

The following are not intended for the education of students:—Bethanien, founded by Frederick William IV., and opened in 1848, for the education of Protestant Sisters of Charity as nurses (Diakonissen), who here serve a novitiate of one year before becoming "sisters." Those sisters are not composed of the lower classes, but frequently belong to the

first families of Prussia.* Unlike the sisterhood of the Roman faith, they pledge themselves to a life of celibacy but for five years, at the end of which, if Providence has thrown in their way some likely fellow, they can doff the modest gray and white; if not, they may renew their vow for other five years, or for life. They are paid a trifling sum yearly, barely sufficient for clothing. They frequently serve in other hospitals, and in the city, as nurses. The proceeds of their services is paid into the treasury of the Bethanien, and they return to their Mütter Haus. Like most establishments, where sisters of charity are nurses, everything is very clean, and kept in the best order. The hospital contains but three hundred beds. I have seen three times that number confined in a smaller space. The roof is high, windows large, rooms light and cheerful, floors beautifully polished, passages heated with air, by pipes brought from the furnace. There are also pipes to convey away the foul air, and introduce fresh. Each ward contains from twelve to sixteen beds, having sometimes the length of a bed between them. There are four physicians and surgeons. The directors and apothecary are both females, elected from among the Diakonissen.

Elizabethan: for diseases of women, generally contains ninety beds—also attended by sisters of charity.

Kinder Hospital: for children of from 1 to 11 years of age.

Armen Haus Hospital: far vagrants, drunkards, incurably sick, incurably insane, and prostitutes, who are all kept separate. It contains one thousand beds, which are well occupied in winter, but in summer rather empty.

Before taking leave of the various hospitals, I feel bound to mention, in the warmest terms, the admirable appointments that distinguish them. Most of them are fitted up with every care to the comfort of the inmates, some of them with elegance, at least elegance as compared with what we usually meet in institutions of a like nature. The most casual observer cannot fail to notice the very great cleanliness and comfort that reigns throughout. Light, airy, and cheerful (one might easily forget he was in an hospital), they form an excellent contrast to the dark, dreary, dismal, overcrowded and ill-ventilated dungeons of the so-called head of affairs medical, Paris; for there, as in many parts of Britain, these are luxuries to which the eye is unfortunately not much accustomed.

When writing of medical affairs in Berlin, it will not be out of place

* The Countess of Stolberg, recently married from this Institution, had been a nurse for many years.

to mention some of the most striking features that distinguish the medical police of Berlin, and Prussia generally; for the same wise and salutary laws for sanitary purposes, are applicable to the whole Prussian kingdom. I select Berlin for the sake of convenience merely. It is divided into a number of wards or sections, each of which is attended by a medical man, who is paid a regular salary for attending to all those residing in his section, who may require his services. His prescriptions are sent to an apothecary, who charges the medicine to the town, and the poor are thus free of expense. All tradesmen, engineers, blacksmiths, carpenters, &c., are compelled to pay a small sum weekly when in service, for the help of their own sick. This originated with themselves, in a bond resembling Odd Fellowship, but has now become a law. The tax is regulated according to their wages, and is deducted from their weekly pay.

There exists another society, which is not fully under the surveillance of the police; and which, on account of its independent nature, stands great chance of being broken up. This is the Hygienic Association. It numbers upwards of 10,000. Members by paying two groschens (about 2½*d.*) monthly, receive the services of a medical man during health and sickness.* It is necessary to announce the birth of every child to the police, and to state whether born healthy or diseased. After some months it must be vaccinated. For this purpose there are institutions in every town, and at convenient distances in the country. Every Prussian must serve three years in the army, and when enlisted he is re-vaccinated. No person is employed in any service, civil or military, without certificate of vaccination. There are a few houses licensed by the city, which are visited twice a week. If the police have reason to suspect that fair damsels receive the nocturnal visits of persons *illegitimately*, they are waited upon and examined, and compelled to go to the Safety Committee. The detection of these is rendered easy by the fact that all houses licensed are situated in a certain quarter of the city, the Koenigs Mauer, and the inmates are not allowed to extend their haunts beyond it. I may here remark that the medical police are in connexion with, but over the town police.

Besides the physicians already mentioned, there are eight for the city, whose duty it is to visit manufactories, workhouses, gaols, boarding-schools, &c., to see that the inmates, have comfortable apartments and

* This association has since been demolished by the police. It was thought that the principles of hygiene they wished to introduce extended even to government; that it was, in fact, a secret political society.

sleeping rooms, sufficient clothing, and food of a proper quality; that they have their regular hours of recreation, and that they are not tasked either in work or study beyond their strength.

Physicians must announce to the police all the cases of cholera, small-pox, epidemic dysentery, or supposed infectious disease, that may occur in their practice, scarlatina and measles excepted. They must also give to the parents or friends of any one dead in their practice, the date of death, and the name of the disease of which he died. Every week a list is published of all the deaths, with the diseases subjoined. The names of the deceased are published in connexion with the church to which they belong. I shall now notice very briefly the curriculum of the study of medicine in Prussia.

Before being allowed to matriculate, students are compelled to undergo an examination in classics, French mathematics, history, and German literature. They have to write a thesis in Latin and German, on any subject given them. The principles of philosophy, logic, and metaphysics, are also entered into. This past, they are admitted to the University. Their study must extend over a period of four years, or eight *semestres*, four of which must be in a Prussian university. At the expiration of two years, they are examined in physics, chemistry, botany, zoology, mineralogy, and some branches of philosophy. This examination is necessary before proceeding with further studies. These examiners are not connected with the medical faculty. At the end of the four years, they are examined by the medical faculty. The examination commences with a thesis prescribed by the dean of faculty. When written and approved of, the dean, who is annually elected from among the professors, examines the candidate on medical subjects generally. If successful, each professor examines him in his particular department. This is called *examen rigorosum*, but in comparison with what is to follow it is not rigorous. He has then to write a thesis in Latin, and print, at his own expense, a sufficient number of copies to enable him to send one to every university in Germany, and three to each professor or teacher attached to the University to which he belongs. This thesis is impugned, and must be defended against three adversaries. The debate, which is not usually very animated, is conducted in Latin, and is public. This over, the title of M. D., is conferred.

But in order to be enabled to practise, a *staats examen* or *cursus* must be undergone. It commences about six or twelve months after, but may be deferred as long as the candidate wishes, and usually lasts five or six months. In this cursus the following branches are gone over:

anatomy, surgery, medicine, and midwifery. In clinical medicine and surgery, the candidate from time to time receives patients, and in presence of professors and students make the diagnosis, offers a prognosis, and prescribes the treatment. He is then locked up, and has to write a complete history of the disease. In midwifery the candidate makes an examination of several women, and states the stage of pregnancy, &c. He has also to make deliveries in presence of the professors. On the dead subject, he has to go through all the operations—amputations, ligatures, &c., besides the more elementary parts of surgery, bandaging, &c. In anatomy, the candidate is required to make a preparation of any part given him, and of any system.

The *staats examen* from beginning to end is conducted by lottery. The candidate draws from a number of others a paper, on which is written what is required of him. He draws in each branch separately.—*Glasgow Med. Jour.*

COMMENTS ON THE LATE PROCEEDINGS OF THE AMERICAN MEDICAL ASSOCIATION.—The following spicy notice of a portion of the Proceedings of the American Medical Association, is from the Virginia Medical and Surgical Journal. We copy it, to show the feeling in an independent and respectable quarter, as regards the "*masterly inactivity*" policy of the Association on the subject of medical reform:

"We come now to the measures of medical reform brought before the Association. It was moved that Dr. WELLFORD'S suggestions touching the licensing power, should be referred to a committee, who should bring the matter fairly before the profession, and, if necessary, memorialize the legislatures of the several States to carry out the wishes of the Association. Immediately there was a professorial onslaught, and the subject was laid upon the table.

It was then moved that no delegates be received in the Association from medical schools, which give two courses of lectures annually, each of which counts towards a degree. Again there was a flutter among the ranks of the lower orders of professors, who teach (!) all the year round, and, on motion of Dr. ATLEE, of Pennsylvania, the resolution was laid upon the table.

In this connection, Dr. SAMUEL JACKSON mentioned an instance of a mechanic of Phœnixville, Pa., who had unsuccessfully attempted the vocations of cabinet-maker and grog-shop keeper, and had subsequently practiced, with popularity, as a Thompsonian quack. It was suggested to him that it was desirable that he should possess a diploma. He left his residence, and returned in one week, with the diploma of a Philadelphia Medical School. In reply to interrogations from various delegates, the eminent professor stated the name of his informant—a respectable practitioner of Phœnixville, and the name of the institution by

which this diploma was granted,—the Philadelphia College of Medicine, commonly known as "McClintock's School." Dr. BRYAN announced himself as the representative of this institution, but no motion was made to deprive him of his seat.

Various efforts were then made to induce the Association to recommend Medical Schools to require their graduates to subscribe to a pledge to submit to the revocation of their diplomas upon conviction of having knowingly violated the Code of Ethics of the National Association. There was such an entire absence of concert among the friends of reform, that these efforts were easily frustrated.

The subject of amendments of the Constitution now came up, and the delegates from Virginia presented the resolutions of the Society of that State, urging such changes in the Constitution, as should exclude from representation in the Association, all colleges and schools which do not conform to its recommendations on the subject of medical education. Dr. STEVENS, of New York, moved the indefinite postponement of all amendments, and it was decided that this motion was not debateable. Accordingly, it was carried by a triumphant majority, and the schools are left to the tranquil pursuit of their glorious objects for another year.

In thus reviewing the late session of the American Medical Association, and arriving at the painful conviction that it accomplished nothing of importance or value on that occasion; that, on the contrary, its deliberations have had an injurious effect, in showing its impotence to effect those radical reforms expected of it, we desire to impress upon our readers the necessity for active and individual exertion in behalf of the interests of the profession. The voice of public opinion will be far more effectual in suppressing the evils which beset us, than the unheeded remonstrances of associations.

We know that it is far easier to tear down than to build up, to point out defects than to correct them, and our expectations of improvement are not very sanguine. Still, we believe it is in the power of individual physicians, by properly cultivating the noblest and most useful of human pursuits, by jealously guarding against every temptation which can lower the dignity of their calling, by refusing to receive students whose character, or want of preliminary education, unfit them for scientific studies, to elevate their profession in their own eyes, and in the opinion of the world."

RECORD OF MEDICAL SCIENCE.

SURGERY.

Case of Elephantiasis Arabum of the Right Inferior Extremity, successfully treated by ligature of the Femoral Artery. By J. M. CARNOCHAN, M. D.—Charles Roller, of lymphatic temperament, and short stature, æt. 27, born in Aix-la-Chapelle, occupation, merchant, left his home in December, 1849, landed in New York in February, 1851, went thence to Connecticut, where for eight months he worked in a factory, standing during his hours of labors; thence went to Virginia, where he worked on a farm for about six months, at the expiration of which period he was taken with fever, of an intermittent character. Up to that time, he had always been in good health.

During the fever, the inguinal glands became swollen and painful; the swelling and pain extending in the course of the femoral vessels as far as the knee. The pain was followed by swelling and redness of the thigh down to the knee. From the knee, the pain and swelling continued to extend downwards as far as the toes; being, at this time confined chiefly to the portions of the limb along the course of the saphena vein, and also of the posterior tibial vessels. The redness and tumefaction here, as in the thigh, were preceded by deep-seated pain. The tumefaction of the limb continued to increase; while, at the same time, febrile exacerbations occurred at intervals, varying from two to six days. After a period of about six weeks from the commencement of the disease, the fever entirely disappeared, and by this time, also, the pain and redness had entirely ceased; the limb, however, remaining hard, swollen and rough, and presenting, in a marked degree, the peculiar characteristics of Elephantiasis Arabum, in the chronic period of the disease. From this time forward, the hardness and intumescence gradually increased, and the limb became so cumbersome that the patient was obliged to give up all business, and confine himself chiefly to a recumbent posture. In this condition, the patient left Virginia for the purpose of seeking medical relief at the New York Emigrants' Hospital, into which he was admitted the fifteenth of January, 1851. The appearance of the patient upon entering the Hospital was somewhat emaciated. He had no febrile symptoms, and the chief difficulty, under which he labored, arose from the enlarged and hypertrophied condition of the right inferior extremity.

The limb was enlarged from the toes to within a short distance below Poupart's ligament. The thigh, although enlarged, was not much indurated; while, from a short distance above the patella, downwards, the limb presented a dense, hypertrophied, hard, scaly, shapeless mass.

The morbid condition of the tissues pervaded the foot and toes, there presenting groups of tuberculated growths. The circumference of the limb around the ankle, was nearly as large as that of the calf; measur-

ing fifteen and one-half inches, while the circumference of the calf measured nineteen and one half inches.

The patient was put under treatment upon entering the Hospital. The recumbent posture was enjoined, and for some time various discutient lotions were used. Bandaging was resorted to, with frictions of ung. Potass. Iodid.; the Iodide of Potassium being also prescribed internally.

At times, also, the limb was painted with strong tincture of Iodine; local and general baths were used, regular bandaging of the limb, from the toes upward, being the while carefully observed.

This plan of treatment was perseveringly adhered to from the fifteenth of January to the twenty-second of March, a period of a little over two months, without any amelioration. Having thus tried, without success, the method of treatment most approved of, I proposed to place a ligature upon the femoral artery, with a view of changing the morbid condition of the structures supplied by the branches of this arterial trunk. A consultation was held, and my proposition was acceded to as preferable to amputation, the usual alternative resorted to in this stage and extent of the disease. Accordingly, on the twenty-second of March, 1851, I secured the femoral artery, a short distance below the origin of the arteria profunda. Upon exposing the femoral artery, this arterial tube was found to be changed, so as to present an appearance somewhat like the color of the aorta of the ox, and to be larger than the common iliac of the human subject. In consequence of this appearance of the artery, after some hesitation, I applied the ligature, preferring to do this, rather than to expose the external iliac, of the soundness of which I could not be certain.

The ligature came away from the femoral artery on the eleventh day, accompanied by secondary hemorrhage, the occurrence of which I expected as probable. For the purpose of arresting the hemorrhage, the *external* iliac artery was secured by ligature, by Dr. A. E. Hosack, who happened to be on duty at the time in the Hospital. The external iliac was found to be about the size of the brachial artery. This, for a time, apparently had some influence upon the hemorrhage; but on the following day, bleeding was again renewed from the orifice, in the femoral artery, with as much profusion as ever.

The hemorrhage was now restrained by the prompt application of a tourniquet, on the *cardiac* side of the bleeding orifice, by the house surgeons, Drs. Thompson and A. K. Smith.

This even failed to stop permanently the hemorrhage, and the blood recommenced oozing copiously at intervals. The patient was now sinking fast, and the ligature of the common iliac, or amputation at the hip-joint, appeared to be the only resources left. But the hemorrhage now being evidently reflux, it was suggested to apply the tourniquet, so as to produce compression on the *distal* side of the bleeding orifice: this was done, and was followed by a complete cessation of the bleeding.

From this time, (April fourth, 1851,) the house surgeon kept an instructive record of the case, which record I have now before me. For

several days, the pulse ranged from 115 to 108: the dressings were carefully attended to, and light diet prescribed. On the twelfth, the leg was found to be considerably reduced in size, and the ligature of the external iliac, came away. On the seventeenth, brandy and quinine, with good nourishment, were ordered. On May the first, finding the leg still more reduced and the lower wound healed, I ordered tincture of iodine to be painted on the leg, and the bandage to be continued; I also ordered a solution of chloride of soda to be used as a wash on the upper wound, which continued to discharge freely.

The patient now went on gradually improving in strength and appearance, and left the Hospital in the latter part of June, completely cured of his malady. At this date, sixteen months after the ligature of the femoral artery, the patient is in robust health, and presents no indications that the disease will return.

Report of Dr. Carnochan.

Tracheotomy for the extraction of a piece of glass.—A boy, aged 8, was brought hastily to the Newcastle Infirmary in a suffocating state, in consequence of a portion of broken glass having got into his wind-pipe during play. He was seen soon after admission, and it was found by the stethoscope, from the distinct whistling sound, most evident a little below the cricoid, that the glass was impacted there, and he was immediately placed under the influence of chloroform. Tracheotomy was then performed, and the trachea slit downwards from the cricoid for about an inch, when a violent convulsive paroxysm of coughing expelled a piece of glass about half an inch long, with irregular edges, and about a quarter of an inch broad. The patient recovered without a bad symptom.—*London Medical Times and Gazette.*

Iodine to Remove Seams arising after a Scald.—Dr. S. Nicholls, of Longford, Ireland, records a case, in the Dublin Medical Press, for August 17th, 1853, in which the strong tincture of iodine was used with much success to remove very unsightly "seams and puckers," which had appeared after the healing of an extensive scald in a child, aged 18 months.

New Method of Operating for Strabismus by a Temporary Ligature.—M. Tavignot sent in a memoir, the object of which is to explain a new method of operating for strabismus. This new operation is founded on the following idea, that, instead of lengthening a muscle supposed to be too short, you must shorten a muscle in reality too long. Instead of leaving the eye to oscillate with difficulty, and sometimes sluggishly, between two muscles, one of which is mutilated by a section, and the other remains always more or less powerless, my method of operating, says the author, attacks the longest muscle, and not only shortens it by

a sufficient length to equal that of its antagonist, but it furthermore acts by increasing its physiological contraction.

First operation.—The longest muscle—that is to say, that one which is opposed to the deviation being exposed in the ordinary manner for strabotomy, the operator proceeds in the following manner:—A blunt hook, with an eye at its extremity, is passed underneath the muscle, so as by lifting it up to detach it from the globe of the eye. The hook is then carried forward, so that its concavity embraces the muscle at a little distance from its aponeurotic expansion. A thread of silk is then passed though the eye of the hook, then the hook itself is brought towards the operator, leaving the ligature under the muscle. By a double twist of the ends of the thread on one another, a simple, yet very resisting, knot is obtained. There only then remains to finish the operation, to tighten the knot, and cut away one of the ends of the ligature. The other end is brought to the corresponding angle of the eye and fixed to a spot on the circumference of the orbit.

The first effect of this ligature is to render the lateral fibres of the muscles more central, and thus to bring about a shortening of this organ. The second effect is to develop an adhesive inflammation, which not only fixes permanently the abnormal juxtaposition of the muscular fibres, but also establishes adhesion between the muscle and subjacent sclerotic membrane.

The ligature not being intended to produce division of the muscle, must consequently be only temporary. Towards the end of the second, or beginning of the third day, it can be easily taken off by means of gentle traction carefully applied to the end which remains.

This first operation may not in all cases produce the effect which we have described. Very severe strabismus will no doubt prove refractory. It is at least with this idea that I devised a way of making it more efficacious.

Second operation.—The hook having been passed under the muscle, as in the preceding case, the ligature is passed, not directly under the muscle, but under the hook, so as to embrace the muscular expansion.

Before going further, it must be discovered by a momentary constriction if the globe is perfectly restored to its normal position. To prove experimentally that the ligature has effected the required degree of shortening, we must proceed, during the operation, in the following manner:—The ligature being passed once under the hook, a different colored thread must be passed through the loop thus formed, then constriction is made by means of the first-mentioned ligature, but taking care to make only one knot, and to make it a single one only. The hook is then withdrawn, and the eye left to itself. The changes in its direction can now be judged of accurately. If the globe is not brought back sufficiently, a larger quantity of muscular tissue must be embraced by the ligature; if the globe is too much brought back, a lesser quantity of muscular tissue must be enclosed; but in either case the ligature already put on must be withdrawn as soon as possible. Owing to the precautions we have adopted with this view, nothing is more easy; the

eye being fixed, one end of the ligature is drawn with one hand, while the other hand pulls the thread passed through the loop of this same ligature. The knot gives way immediately to this opposed extension. There only then remains to pass the hook again underneath the muscle (if it has not been already done before taking away the ligature) and recommence the operation, keeping in mind the data furnished by the first trial.—*Dublin Med. Press*, from *Presse Méd. Belge.*

Upon the Entire Resection of both Superior Maxillary Bones. By M. HEYFELDER, Professor of Clinical Surgery at Erlangen.—Gensoul at Lyons, and Lizars in England, were the first to extirpate (1827) the superior maxillary bone of one side in cases of disease. Since then the operation has been often repeated, and in 1846, Ried (*Die Resectionem der Knochen*) was able to collect thirty-five cases, of which twenty-four were followed by success. If to these be added the cases of Morel-Lavalle, Maisonneuve, Chaissaignac, Robert, and Muston, together with those related in the Surgical Cliniques of Munich, Wurzburg, and Erlangen, not yet published, above fifty cases may be easily enumerated. The same remark cannot be made of the resection of both superior maxillæ. M. Velpeau accords the honor to Rogers, "who, in 1824, took away the upper jawbone of both sides as far as the pterygoid processes, and who found it scarcely necessary to divide the lip." This description is too brief to be intelligible. Liston removed the entire superior maxillæ of one side, and part of the other. Dupuytren (1818) effected the partial removal of both maxillæ in a man sixty-eight years of age.

Thus, the cases hitherto known are but examples of the partial resection of both maxillary bones.

The complete extirpation of both bones has been performed by Heyfelder twice. The first operation was in the summer of 1844; the second, in January, 1850.

Case 1.—A. Schmidt, aged 25, came to the Clinique, June 13th, 1844, suffering from a tumor of the face, which, from his account, had commenced a-year ago, in the posterior part of the palate, and had gradually involved both superior maxillary bones. The nose was pushed upwards, and flattened; the palatine arch was depressed towards the tongue; the face was affected with œdematous swelling; both respiration and deglutition were impaired, speech was embarrassed, and the sleep broken. The teeth, though loosened, were sound; only two incisors were wanting. The tumor appeared everywhere hard, uneven, and insensible to the touch, and did not pass beyond the boundaries of the superior maxillary bones. The constitution was good; lancinating pains had been felt in the tumor only during the last few weeks.

Dr. Heyfelder concluded that the tumor was of an indolent malignant character, and that the only remedy consisted in the entire removal of both maxillary bones. The operation was performed, June 23, 1844. The patient being seated in a chair, the head resting against the chest of an assistant, two incisions were made from the external angles of the

eyes in the labial commissures, and the included parts were reflected upwards to the internal angles of the eyes, and to the ossa nasi. The flap, thus formed, was raised towards the forehead, until the infra-orbital ridge was exposed. Then the chain-saw of Jeffray was passed through the spheno-maxillary fissures, and the molar bones were divided; the maxillæ were next separated from the ossa nasi; the vomer and the thinner bones were cut with strong scissors; after which a chisel, applied with moderate force to the superior part of the tumor, was sufficient to effect its separation. The accessions of syncope prolonged the operation, which, however, did not last longer than three quarters of an hour. Very little blood was lost; torsion and compression sufficed to arrest the hæmorrhage. Two hours afterwards, the edges of the wounds, from the angles of the eyes to the corners of the mouth, were united by twenty-six points of suture, and cold lotions were applied; there was no reaction nor swelling; the patient could swallow water and broth. Four days after the operation it was remarked, that the wounds had become almost entirely united by first intention. In six weeks the patient was presented at the Physico-Medical Society of Erlangen, and on August 23 he was discharged.

The following was his condition:—There was no deformity of the features: in his mouth there was seen along the median line a fissure thirteen lines long and three lines broad; the extirpated parts had been replaced by the tissue of a cicatrix, firm and solid at the circumference, but somewhat softer near the fissure; the soft palate and the uvula were in their natural place; deglutition was free, and the tongue in a better state than formerly; the nose had resumed its usual form and direction; the face, which, before the operation, was monkey-like, once again possessed a human expression.

The microscopical examination of the tumor showed that it was of cancerous nature. Six months afterwards, the patient, in good health, went to work in the fields; but in the summer of 1845, Dr. Heyfelder was informed that another tumor was forming in the forehead.

Case 1.—Martin Lochner, aged 55, was affected in the upper lip, twelve years ago, with a cancerous growth, which was operated upon three years after its appearance. For two years there was no return; but, subsequently, a small tumor developed itself near the cicatrix, approached the nose, and excited violent pains. Soon a cancerous ulcer formed, which extended over the right half of the upper lip, the ala nasi, and the palate. The patient came into the hospital Jan. 21, 1850, in the following state:—A horrible cancerous ulcer, commencing at the right commissure of the mouth, occupies the greater part of the upper lip, and has destroyed both the right ala and the septum nasi. All the parts were covered with painful, bleeding, fungous growths. The palatine arch was converted into an irregular, knobbed, cancerous mass; most of the teeth were lost; an offensive secretion was constantly flowing, and the patient was thinned and worn out.

The operation was performed January 24. Two incisions were made, exactly as in the preceding case. The chain-saw was used to separate

the left os malæ, and Liston's bone forceps to divide the right. The remains of the septum nasi and the vomer were cut with strong scissors. A considerable quantity of the soft parts was likewise taken away. The patient was fed by a syringe. The left coronary artery bled three hours after the operation, but it was easily tied. The case went on well; and, on February 18, when the patient was presented at the Physico-Medical Society, the following was his condition:—The greater part of the wounds were united; but a deficiency existed in the face, corresponding to the disease, at the superior part of which were seen the vertical portion of the ethmoid, and the two ethmo-turbinal bones. In the velum palati there was an opening, two centimetres wide. The destruction of the lip and of the nose produced on the right side a triangular opening, the base of which corresponded to the mouth, and the superior angle to the root of the nose.

He can take liquid food, but his speech is unintelligible; but, when the opening in the palate is closed by the sponge, he can make himself understood. Autoplastic operations were unadvisable, from the exhausted condition of the man.—*Med. Times & Gaz. from Rev. Medico-Chirurgicale de Paris.*

OBSTETRICS.

Two cases of early viability, and an interesting case of premature birth By M. McCulloch, M. D., M. R. C. S. L., Lecturer on Midwifery, McGill College, Physician to the University Lying-in-Hospital, &c.—Mrs. Henderson, aged 28, the wife of a grocer in this city, had been married about a year, and was attended by me in her first labor on the 13th February, 1849. She was delivered of a son whose weight was ascertained by his father and myself not to exceed thirty-six ounces, and his length, likewise accurately taken, was fourteen inches. He had some hair on his head, and cried as soon as he was born. He was wrapped in cotton wool, and within twenty-four hours sucked his mother's breasts without difficulty. Her nipples were well formed and she had already a sufficient supply of milk. On the 24th he weighed forty-seven ounces, and on the 13th March, when a month old, his weight was 8lbs. 11 ounces, and length 16 inches. On 13th April, I put him again into his father's scales, and found his weight to be 5lbs. 2 ounces, and length 17½ inches. Up to this date his health had been so uniformly good that he never needed any kind of medicine, and he was, in every respect, except size, a fine thriving child. Soon after the commencement of the third month he was unfortunately exposed to cold, and died of inflammation of the lungs, after being ill about a week.

The mother of this child could not remember the date of the last appearance of the catamenia nor when she quickened, but thought she became pregnant about the first of July, and if there was no error regarding this date, her son had been in utero seven months and thirteen days, and there must have been some check to his uterine progress, but if we take nto consideration the favorable state of his health and daily increase in

bulk after birth, and his immature weight when two months old, I think his mother may have been mistaken regarding the first of July, and that it is more probable the duration of his previous existence did not exceed the end of the sixth month.

Mrs. Galbraith miscarried on the 28th of January. She became again pregnant before the catamenia returned, and was delivered by me on the 23d of July—175 days, or twenty-five weeks after the miscarriage. The mother refused to allow the child to be weighed, but I ascertained its length to be thirteen inches. It is probable that its weight was less than two pounds, and that the duration of pregnancy did not exceed twenty-two weeks. Notwithstanding, it survived three hours, and its cries were so loud and frequent during the first forty minutes as to astonish every one present.

Mrs. ——, the wife of a former steward of the Montreal General Hospital, the mother of several children, had a child born within 6 months and 14 days of the possible commencement of pregnancy. Previous to this period, she had resided some months out of town and menstruated regularly. She was the patient of a medical friend, and I had an opportunity of seeing the child about six weeks after its birth, when it was still very small, and I had no doubt of its being a satisfactory case of early viability. It survived, and is now upwards of 10 years of age: It took the breast well at birth. The testes descended, two months after birth, accompanied by a loop of intestine, producing scrotal hernia, which was radically cured by the use of a truss at the age of 18 months.—*Montreal Monthly Journal of Medicine & Surgery.*

PATHOLOGY AND PRACTICE OF MEDICINE.

Ætheric Solution of Balsam of Tolu in Chronic Bronchial Catarrh. By Dr. Roziere.—The author employs, in cases of bronchorrhœa and obstinate cough, also in cases of aphonia, from continued talking and singing, as well as in other chronic affections of the chest, æther. sulphur. 60 grmm.; bals. tolutan. pur. 20 grmm. He puts the mixture into a suitable vessel, and makes the patient inhale the vapor every half hour for two or three minutes.—*Med. Times and Gaz.*

Oxalate of Lime, and its relations to certain forms of Neuralgia. By H. A. Johnson, M. D.—We are indebted for what we know of this deposit mostly to Dr. Golding Bird. From his observations he was led to the conclusion that oxalate of lime occurs in more than one-third of the cases in connection with an excess of uric acid or urate of ammonia, that in all cases there is an excess of urea, and that it is frequently accompanied by an excess of the phosphates; he also thinks it probable, that the uric and oxalic diatheses are both produced by the same morbid influences.

Uric acid, as existing in normal urine, is, without doubt, derived from the nitrogenized tissues of the body, but when found in excess, it

may usually be traced either to ingesta, which the juices of the stomach have not power to dissolve, or to a too rapid destruction of tissues under the influence of heat, &c., as in fevers and inflammations; can oxalic acid be traced to a similar source?

Dr. G. Bird has presented a very ingenious theory for the production of this acid from urea and uric acid, but there is generally an excess of one or both of these ingredients accompanying the oxalic deposits. Should we expect this to be the case, if the abnormal product was the result of a transformation of the urea and uric acid? It seems to me not. My own observations have been limited, but I have thought, from a careful study of quite a number of cases, that, while a temporary functional disease of the digestive organs or the introduction into the digestive tube of a large amount of food, difficult of perfect solution in the juices of the stomach, will generally give rise to uric acid deposits in the urine, chronic disease of the alimentary canal, whether functional or organic, will *more* generally be found to exist with the oxalic diathesis.

In quite a large number of instances in which I have observed the oxalate of lime in the urine, the patients have not only been affected with dyspepsia, but have also been subject to severe attacks of neuralgia. In the first few instances, the neuralgic pains were confined to the lower extremities, and I strongly suspected that they were produced by mechanical irritation of the vesical mucus membrane from the crystals of the oxalate with which the urine was loaded at the commencement of the attack, but which, towards the termination, were replaced by an excess of the phosphates.

I have since observed neuralgic pains in the face, superior extremities and in the chest, co-existing with oxaluria, and, after carefully studying a number of cases, it seems to me evident, that the neuralgia and the urinary deposits sustain to each other an intimate relation through a common cause, viz: the derangement of the digestive organs.

It is perhaps probable that oxalic acid, whether produced from malassimilated food, as I think, or, from a metamorphosis of urea and uric acid, may exist first in combination with ammonia, as Dr. G. Bird has suggested. If so, it is possible, that it may, instead of being selected by the kidneys and combining in those organs with lime, be precipitated in the tissues. The crystals of this new salt, many of them smaller than blood globules, and presenting sharp angles and edges, may thus, by mechanical irritation, act directly upon the suffering structures, producing that intense and indescribable pain, for controlling which, anodynes and narcotics have so little power.

Permit me to allude to my own personal experience. During the last few months I have been frequently annoyed by neuralgic pains, and always after eating freely of oranges. I had never been in the habit of using this fruit until during my recent visit south, but while in Natchez and New Orleans, it constituted almost my only diet. I also ate very freely of it during my return home.

It is to my mind an interesting fact, that the first neuralgic pain that

I ever experienced, so far as my memory serves me, was while in Natchez. Since my return I have frequently partaken of the fruit, and almost always with the same result, pains of a neuralgic character in my face, chest, knee, dorsum of the foot, &c. These facts induced me to institute the following experiment.

At 8 o'clock A. M., I breakfasted on beef steak, potatoes, corn bread and two eggs. After breakfast I walked two miles. At 11 A. M., the urine passed, was normal in color, specific gravity 1030. After standing, there was no deposit of any kind; on a careful microscopic examination, I was unable to detect a single crystal of the oxalate of lime. I then ate four large oranges; at 1 P. M., I dined on a small quantity of roast beef, and whortleberry and green currant pie. At 7 P. M., the urine passed was of straw color, specific gravity 1036. After standing 30 minutes, a sediment was thrown down, consisting mainly of oxalate of lime in very large beautiful crystals. I think I never saw a specimen of urine in which it existed in greater abundance, or in which the crystals were larger. It also contained urate of ammonia and an excess of urea. I placed some of it in a watch glass, and added strong nitric acid; in a few moments it was almost a solid mass from the crystals of nitrate of urea. The urine passed the next morning at 7 o'clock had a specific gravity of 1030, and contained an excess of urea and uric acid and epithelial scales. At 11 P. M., the urine was normal. I then ate four more large oranges, and went to bed. The urine passed at 7 o'clock the next morning was loaded with the oxalates. These two experiments, one upon the urine of food, and the other upon the urine of blood, seem to me to indicate: 1st, that oxalic acid may be produced from the ingesta; 2d, that oranges, and probably all fruits containing citric acid, may give rise to the oxalic diathesis.

The manner in which the transformation is effected is uncertain, nor is it a matter of much consequence. I venture, however, to present as a possible explanation the following formula:

	C.	H.	O.		C.	H.	O.
6 at. of cit. acid —	24	18	30.	—	12		18 — 6 at. oxalic acid.
					12	10	10 — 2 at. lactic acid.
						2	2 — 2 at. of water.
						6	

We have remaining six atoms of hydrogen, which, united with 2 at. of nitrogen, would produce 2 at. of ammonia.

What influence have the organic acids in causing neuralgia through the derangement which they produce in the performance of the digestive functions? Do the neuralgic pains depend upon mechanical irritation, as I think may be possible, or do they depend upon perverted nutrition of the nervous structures, as I think more probable? These are interesting subjects of inquiry, but I have not time to pursue them further. —*North Western Med. and Surgical Journal.*

Treatment of Acute Articular Rheumatism by lemon juice. By HECTOR PELTIER, M. D. Edin., Professor of Institutes of Med., Montreal School of Medicine; Physician to the Hotel Dieu, &c.—I wish to place

before your readers the result obtained by myself with lemon juice in acute rheumatism. I have now used it since 1850, and whenever it could be properly tested. It is to Dr. G. O. Rees, of Guy's Hospital, London, that we are indebted for the employment of this medicine in rheumatism. I cannot give any reliable explanation of its decided benefits, because alkalies act also beneficially in many cases of a similar kind. The way I employed it was simply by directing that the lemon itself should be sucked by my patients now and then in the course of the day. They never used more than two per diem. Under its influence, the pain and stiffness of the joints diminished in four or five days and sometimes sooner.

The cases I have had were genuine acute rheumatism, with all the characteristic symptoms present, but free from complication with any inflammation of the heart. I have had frequent opportunities of testing what I would call this invaluable, though simple mode of treatment, in the Hotel Dieu of Montreal, as well as in private practice, for during the last winter and spring, rheumatism raged extensively in this city. I know well that all species of remedies have been tried in rheumatism, but none have given me so much satisfaction as lemon juice. As for colchicum, its reputation is losing ground; and I think with good reason. It is a powerful medicine, but has been used too freely, and given in altogether too large doses. From my experience, I am disposed to believe that the majority of practitioners will honestly confess that it has done more harm than real benefit in both gout and rheumatism, and as it has been lately remarked with great propriety by Dr. Bouchardat, in his Annuaires de Therapeutique for 1852, "the greatest number of cases of death from gout or rheumatism is more attributable to colchicum than to the metastasis of the disease, as we are prone to say when a bad result supervenes." Salines are very useful in acute rheumatism, and form the best purgatives that can be employed. I am in the habit of prescribing them once or twice a week in connection with the lemon juice throughout the duration of the case. Iodide of potassium I also use, but only in the latter state, as an alterative.

Dover's powder I have given at night to allay any irritation. Fomentations of the joints I order but seldom, and very sparingly, because they give more trouble than real advantage.

As an illustration of the preceding remarks, I will mention one case in particular that I treated in February 1853, which gave me a good deal of uneasiness on account of advice repeatedly offered to the patient by his surrounding friends. Mr. J. L——, a gentleman connected with the first banking institution in Canada, was affected with acute rheumatism. Every joint was immovable, the pain intense, skin hot and perspiring profusely, pulse 110. From past results with lemon juice, I decided to use it, and directed two lemons to be sucked daily, confining him to low diet, and barley water as a drink. Nothing else was ordered, but an occasional saline draught.

The improvement became sensible in less than a week afterward. During this period many friends called upon my patient, each one

giving in his opinion, &c., all, I regret to say, against my mode of treatment. Being sure of a successful issue, from past experience, I paid no attention to their statements and insinuations, but continued my treatment, and to the amazement of all his friends, Mr. J. L—— returned to the bank the thirtieth day from the date of his illness, perfectly well, and has not suffered since, though the temperature has been very changeable during the spring and this summer.

If you think, Messrs. Editors, that the above remarks, although written currente calamo, are worth publishing, I shall thank you in advance, and give you my best wishes for your success.—*Montreal Journal of Medicine and Surgery.*

On Intermitting Diabetes, and on the Diabetes of Old Age. By H. B. Jones, F.R.S., Physician to St. George's Hospital.—The author's object in this communication was to point out some phenomena connected with diabetes, which he had not found mentioned by other writers. Preliminary to the record of the cases, the author offered some observations on the incorrect results obtained by calculating the amount of sugar present in the urine from the specific gravity. If diabetic urines were solutions of nothing but sugar in distilled water, the tables by Dr. Henry, and the amount of sugar calculated from the specific gravity, would give all the information required; but a multitude of other substances were present besides sugar, each of which was variable, and each of which might cause the specific gravity to vary, whilst the quantity of sugar might remain constant. To be accurate, therefore, the amount of sugar should always be determined by direct experiment, and never calculated from the specific gravity. Results were given, exhibiting the specific gravity, the amount of sugar calculated from solid apparatus, and the absolute amount of sugar obtained by direct analysis. On the subject of intermitting diabetes, the author observed that there could be little doubt that our knowledge of the nature of this disorder might be extended by means of accurate determination of the varieties in the amount of sugar in the urine passed at different periods of the day, and under different circumstances. His object in relation to this form of the disease was to record some cases in which, either from the medical treatment, or the regimen, or the natural course of the complaint, the variation in the amount of sugar was not from much to little, but from highly saccharine urine to total absence of sugar. The state of the urine a few hours after the sugar had disappeared, and an hour or two before it reappeared, was most especially worthy of attention, inasmuch as it might lead to a truer knowledge of the state of the system which preceded the commencement of diabetes. In intermitting diabetes the disease might be seen beginning and ending, and the explanation of the state of the urine which preceded the appearance of the sugar and followed its disappearance, must be included in the true theory of diabetes. Moreover, a better knowledge of the antecedent phenomena might enable us to ward off the disease, if not to treat it with more success. The records of seven cases of the intermitting form of the disease were given, and very minute particulars in several, illustrated the amount of sugar present in the

urine at stated intervals in the twenty-four hours, as well as the influence of particular forms of diet on the proportion of sugar excreted. In these cases the state of the urine just after the sugar had disappeared was worthy of attention. A remarkable excess of urea was constantly found before and after the sugar disappeared; and although this might be attributed to the animal diet, yet the occurrence of free uric acid and oxalate of lime in the urine, pointed most clearly to a state of indigestion which was every day to be found without any sugar appearing in the urine. The author offered the following theoretical contrast between ordinary and saccharine indigestion: Ordinary indigestion showed itself in a want of action on the sugar and starch taken as food, in consequence of which excessive acidity was produced—that is, the changes in the non-nitrogenous food were imperfect. Imperfect changes also occurred in the nitrogenous food; this was made evident by an excess of urates and urea in the urine, and perhaps also by the formation of oxalate of lime. In diabetic indigestion the effect might be traced also on the two great classes of food. At first from the non-nitrogenous food sugar was formed instead of acid. Ultimately, if not simultaneously, sometimes the arrest of healthy changes extended to the albuminous food, and, instead of an excess of urates and urea, other products were formed, one of which was sugar. It was possible that some of these products might be found in the urine. Possibly benzoic acid, which is present in some cases of diabetes, in variable quantities, might be one of the new products. Whether this theory were true or not, it was of practical importance to remark the tendency to acidity in these cases of intermitting diabetes. In such cases, animal diet alone, or with alkalies, might stop the formation of sugar. It followed also, that, when oxalate of lime, uric acid, and excess of urea, were found in the urine, it was probable that the diabetes might be temporarily, if not permanently, removed. The occurrence or absence of these substances in the urine might lead to the recognition of the stage of the disease, and they might thus guide us in our prognosis and treatment. The second part of the communication related to the frequency of diabetes in old age. Reference is made to a paper, by M. Dechambre, on this subject, who concluded, from observations made on the urine of old people at the Salpetriere, that sugar was habitually present in the urine of old people. The author gave the particulars of nine cases of diabetes in elderly people, and thought that the occurrence of this affection at the latter periods of life pointed also to the theory of diabetes as an indigestion resulting from an arrest of healthy changes in the food. The cases mentioned in this communication were, in the opinion of the author, opposed to the view of diabetes depending upon an affection of the nerves, or of the liver; and his daily observation led him rather to the view taken by Dr. Prout, that diabetes was an indigestion, and that it first affected the non-nitrogenous, and afterwards the nitrogenous, constituents of our food. As regarded treatment, whatever was beneficial for excessive acidity, was found equally serviceable in diabetes. Alkalies were used in all the cases with benefit. Small meals, free from sugar and acid, and the substances that could give rise to sugar and acids, constituted the best diet. He found, also, that vegetable

acids with alkalies were occasionally useful. In a foot-note, the author mentioned some experiments he had not yet published, determining the quantity of sugar in several kinds of beer and wine. Porter contained from 27 to 57 grains of sugar in each ounce of liquid; ale from 43 to 50 grains; beer 25 to 40 grains; port-wine 8.5 to 11 grains; sherry 2 to 4.7 grains; claret none. The absence of all sugar, and the presence of a little alcohol, caused claret to taste highly acid, while the quantity absolutely present was not more, sometimes less, than in other wines which have no acid taste, as, for example, most port wine.—*Medical Times and Gazette.*

Chloroform Inhalations and Injections of Air in Ileus. By MERZ.—A girl, aged 27, up to the present time in good health, was suddenly seized with stercoraceous vomiting without obvious cause. After narcotics and mild drastic purgatives had been tried without avail, injections of air per anum were administered, with the effect of mitigating her distress. Then chloroform was inhaled so as to produce complete paralysis, when a rumbling or rolling of the bowels ensued, followed by discharge of fæcal-smelling flatus and copious evacuations; the patient recovered.—*Med. Times and Gaz.*, from *Schw. C. Ztschr.*, 1853.

MATERIA MEDICA AND THERAPEUTICS.

Anæsthetic Action of the Lycoperdon Proteus.—M. Flourens related some observations made by M. Gérard upon the anæsthetic action of the lycoperdon proteus. "I took," says the author, "the lycoperdons which I had gathered last autumn; I collected their substance, and then experimentalized with about twelve grammes (℥ss) of the capillitium, mixed with the spores. I put this substance, which burns like tinder, upon a match, which kept up the combustion, and plunged my head into the smoke for fifteen minutes. The sharpness of the smoke incommoded me at first, and caused a slight degree of irritation of the pharynx; then I had a coryza, which soon passed away; then a sensation of smarting in the eyes, which I was obliged to close; but the feeling of stupor was scarcely perceptible. During the inspiration of the smoke I withdrew from the apparatus, after the carbonization of the capillitium, and in a few instants I felt a sharp pain, weight of head, and a peri-cephalic constriction, without actual suffering. My eyes, which had become red, shut involuntarily, although there was no feeling of somnolence. After four hours, the head became free, but the malaise continued six hours. The day afterwards the conjunctiva was no longer red, but the irritation of the eyelids continued. I experienced none of the lethargy mentioned in the *Gazette des Hôpitaux*, where it is stated, that the animals submitted to its action fell into a condition resembling death.

I am sure that the properties of the lycoperdon bovista and L. excipula fermis are the same as those of the lycoperdon proteus."—*Med. Times and Gaz.*

Succus Taraxaci Paratus.—The preparations of Taraxacum, or *dandelion* root, have within a few years past attracted considerable attention from the medical profession, and have been an object of experiment from skilful pharmaceutists both in England and the United States. The hurtful effect exercised by heat in evaporating solutions of the soluble matter of dandelion, has long been noted, and many recollect the molasses-like extract which formerly was too commonly seen, unmarked by any distinct, sensible property of the recent root. The application of spontaneous and vacuum operation in making the solid extract, demonstrated this beyond cavil, and in the last U. S. Pharmacopœia directions were given for this precaution, as well as in regard to the period of collecting the root. The *Liquor Taraxaci* (fluid extract) described by Mr. Redwood in Gray's Supplement, is prepared by macerating four pounds of the recently dried root in sufficient cold water for 24 hours, expressing, and evaporating to 36 fluid ounces, to which liquid 12 fluid ounces of alcohol is added; hence each fluid ounce of the preparation represents a troy ounce of the *dried* root. The dried root of the dandelion is more easily extracted than when it is recent, owing to the glutinous character of the juices and the difficulty of effectually disintegrating the tissue of the root, so as to completely reach the contained matter by menstrua; yet it is more than probable that the evaporation of the aqueous solution to the proper degree of concentration, not to speak of the effect of the process of drying the root in the first place, injures the product. This is partially avoided by a process published in the 20th volume, page 86 of the Journal of Pharmacy, the *recent root* being employed, and the resulting preparation representing about twice its weight of the fresh root. In the preparation about to be described, the virtues of the root, be they what they may, are preserved unimpaired, as no heat is employed in the process; the natural juice of the plant being merely admixed with alcohol to preserve it from change. Take of fresh Dandelion Roots (collected in September or October) twenty pounds, (*av.*) Alcohol, 835, sp. gr. four pints. Slice the roots transversely in short sections, and by means of a mill or mortar and pestle reduce them to a pulpy mass; then add the alcohol and mix them thoroughly.

The mixture thus far prepared at the season when the root is proper for collection, may be set aside in suitable vessels; stoneware jars are appropriate; and extracted as the preparation is needed through the other seasons. After having stood a week, or until a convenient time, the pulpy mass is subjected to powerful pressure, until as much as possible of the fluid is removed. This is then filtered and bottled for use. It is necessary that sufficient time should elapse after the pulp is set aside for the alcohol to penetrate the fibrous particles and commingle with the natural juices, as well as for the woody structure of the root to loose its elasticity, that it may yield the juice more completely on pressure. When the pulp has stood six months in this manner it yields the juice with great readiness, and is possessed of the sensible propertes of the dandelion in a marked degree. When eight pounds, avoirdupois, of the root is thus treated, after standing several months, the practical result

is about six pints of fluid, with an ordinary screw-press. This yield will vary in amount with the condition of the root when collected, and the length of time it is exposed afterwards, as well as the power of the press used. Should the alcohol in this preparation be contraindicated, it might be partially removed by exposure in a water bath until the juice was reduced to five-sixths of its bulk, and then for every pint of the residue eight ounces Troy of sugar may be added and dissolved in it.—*American Journal of Pharmacy.*

Note on Cucumber Ointment.—Several years ago, (April, 1847,) Mr. Procter published in this Journal a note on the preparation of Cucumber Ointment, since when it has gradually come more into use as an emollient application to irritated parts of the skin. It may not be improper to again call attention to the preparation and the mode of preparing it.

Take of Green Cucumbers, (suitable for table use,) 7 pounds, *av.*
" Lard, (the purest and whitest,) . . . 24 ounces "
" Veal suet, (selected,) . . . . . 15 ounces "

The unpared cucumbers, after being washed, are reduced to a pulp by grating, and the juice expressed and strained. The suet is cut in small pieces, and heated over a salt water bath until the fat is fused out from the membranes; the lard is then added, and when liquefied is strained through muslin into a wide-mouthed earthen vessel capable of holding a gallon, and stirred until it commences to thicken, when one third of the cucumber juice is added, and beaten with the ointment by means of a wooden spatula until its odor has been almost wholly extracted. The part that separates by standing is decanted, and the other two thirds consecutively incorporated and decanted, in the same manner. The jar is then closed covered and placed in a water bath until the fatty matter entirely separates from the exhausted juice. The green albuminous coagulum which floats on the surface is then skimmed off, and the jar put aside in a cool place that the ointment may solidify. The crude ointment is then separated from the watery liquid on which it floats, melted, and strained; a part into a jar and closely sealed for keeping, the remainder into a mortar, and triturated with a little rosewater until it is very white and creamy, for present use. It is usual to keep this ointment in glass jars covered with rosewater, to prevent access of the air.—*American Journal of Pharmacy.*

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NOTICE TO CORRESPONDENTS.

Communications and Books for notice should be addressed to the Editors, care of Messrs. Lindsay & Blakiston.

Letters, &c., connected with the *business affairs* of the Journal should be addressed to the Publishers.

Papers for publication must be received *before* the 20th of the month, or they cannot appear in the forthcoming number.

The following Journals have been received in exchange:

Medical News, September. Philadelphia.
New Orleans Medical and Surgical Journal, September.
New York Journal of Pharmacy, September.
Nelson's American Lancet, August and September.
Memphis Medical Recorder, September, 1853.
Virginia Medical and Surgical Journal, ditto.
Southern Journal of the Medical and Physical Sciences, (Nashville), ditto.
St. Louis Medical and Surgical Journal, ditto.
Charleston Medical Journal, ditto.
Peninsular Journal of Medicine, Ann Arbor, Michigan, ditto.
Kentucky Medical Recorder, ditto.
Buffalo Medical Journal, ditto.
New Jersey Medical Reporter, ditto.
Philadelphia Journal of Pharmacy, ditto.
New York Medical Gazette, ditto.
New York Medical Times, ditto.
Western Lancet, ditto.
Boston Medical and Surgical Journal, (weekly,) ditto.
New Hampshire Journal of Medicine, ditto.
London Lancet, to Sept. 3d, inclusive.
London Medical Times and Gazette, to Sept. 10th, inclusive.
Edinburgh Monthly Journal of Medical Science, August and September, 1853.
London Pharmaceutical Journal, September, 1853.
London Journal of Medicine, August, 1853.
Dublin Medical Press, to August 31st, inclusive.
Moniteur des Hopitaux, Paris, July, 1853.

BOOKS RECEIVED.

De Boismont on Rational History of Hallucinations. From Messrs Lindsay & Blakiston.
Physicians' Visiting List for 1854. From the same.
Transactions of the Tennessee State Medical Society for 1853.
Transactions of the Medical Association of Southern Central New York, for 1853.
Bellingham on Diseases of the Heart. From the Author.
The Prescriber's Pharmacopœia. From Messrs. S. S. & W. Wood.
Dr. Cock's Manual of Obstetrics. From the same.
Quarantine Reports to British House of Commons. From the British Government.

The foreign correspondents of the Examiner will please direct their Exchanges and other communications to the care of Tribner & Co., No. 12 Paternoster Row, London, or Mr. H. Bossange, 21 Bis, Quai Voltaire, Paris.

THE

MEDICAL EXAMINER,

AND

RECORD OF MEDICAL SCIENCE.

NEW SERIES.—NO. CVI.—OCTOBER, 1853.

ORIGINAL COMMUNICATIONS.

On the Diseases and Injuries of Seamen. By G. R. B. Horner, M. D., Surgeon U. S. Navy, Philadelphia.

A very rare case of abscess in the left parotid gland occurred on board the Delaware in her voyage to Brazil. The patient was a seaman of 33 years, who, without any known cause, was seized with swelling and acute pain in the part, without any constitutional symptoms for four days after his admission on the sick-list. Fever then ensued, and was followed by a great increase of pain and swelling. This soon extended itself to the whole side of the face, and the lids of both eyes became tumefied so much as to intercept vision. Linseed poultices were at first applied, and upon the extension of inflammation into the surrounding parts, were mingled with a solution of super-acetate of lead. Purgative pills were taken, the parts were scarified, and suppuration having occurred on the sixth day, an incision was made into the abscess with a lancet and a large quantity of fœtid pus let out which continued to flow for many days. In the meantime the poultices were continued, and opium rubbed up with vinegar was given to relieve pain. Fever was subdued with the spiritus mindereri and tartar emetic, the blue pill was

taken at night and worked off with epsom salts or magnesia and rhubarb. The abscess, however, refused to close; the neck and left angle of the lower jaw became indurated and swelled, and his constitution depraved. A bitter infusion and syrup of sarsaparilla were prescribed as needed; lead water was injected into the cavity formed beneath the ear, a lotion of sulphate of zinc was used, the black wash was also injected and a seton passed through the abscess from above downwards. An incision was likewise made beneath the left eye to let out a collection of pus formed there. He was put on a diet adapted to his condition, and at first low, then nutritious. The bowels were kept open by the purgatives mentioned, cream of tartar water, and castor oil; and tone was given to his system by the sulphate of quinine dissolved in elixir of vitriol and water, and properly sweetened. Under this treatment he was restored to health two months after his admission.

An abscess of a still more obstinate kind, bearing a strong resemblance to that of the armorer, occurred in the above ship, and was treated at the same time with the abscess just described. But the duration of the former one was much longer, that being continued a period of six months, and it was the result of a scrofulous inflammation of the left hip joint, or morbus coxarius. The subject of the affection was a sailor of small size, aged 22 years, who stated that he had fallen on the left hip six years previously, and had hurt it so much as to have been lamed for a week, but that afterwards he suffered no inconvenience until just before he was taken under treatment. Pain then came on in the left groin and its glands began to swell. Two days subsequently he had cough, general pains, and other signs of having caught cold.

The ship at this time was lying in Hampton Roads ready to sail, and only awaiting orders, and a number of her crew were affected with catarrh. As the patient seemed only affected with this, and had said nothing of his having once injured his hip joint by a fall, he was given at first only a pectoral and a dose of epsom salts and tartar emetic, and directed to use frictions to the seat of pain with vol. liniment. A soap plaster was next applied to the glands, which reduced their size, but the pain continuing, the parts beneath becoming tumid and indurated, two

blisters were put on in succession. The swelling still increasing, poultices were substituted, and excited suppuration three weeks after his admission. By this time the swelling extended throughout the groin and occupied the parts above and below Poupart's ligament. An incision was made into the swelling of the groin, a profuse discharge of bloody pus took place, and in a few days assumed a greyish hue. The nature of the disease having been previously developed satisfactorily, the patient had been prescribed the syrup of sarsaparilla twice a day in the dose of three ounces. A month afterwards another incision had to be made on the inside of the thigh, next the scrotum, to let out pus. The blue pill was given, the syrup continued, and frictions were used to relieve pain and stiffness of the thigh. He also took opiates as required, and an infusion of cinchona and gentian, after having used the syrup for more than a month. His bowels were kept open by pills and castor oil; black wash was applied to the abscess as a lotion, and when the former had closed, an issue was made over the joint with caustic potash, and beans were put into the issue formed to keep it running. Under this treatment the affected parts healed kindly though slowly; but by the twelfth of December, at the time the ship had crossed the tropics and got on the coast of Brazil, he had become pallid, emaciated and debilitated, and besides had had an ulcer formed on the sacrum from his having been bedridden two months. The left lower extremity was also soft, œdematous and swelled, the leg was flexed on the thigh, and this on the pelvis, and Amesbury's splint was applied to keep them extended, and prevent permanent flexure and shortening of the limb. To remove swelling a bandage was first applied around it from the foot upwards.

Notwithstanding all that was done for him, and his previous improvement, he became still worse on our arrival at Rio, and was seized with fever. The parts again swelled, suppuration returned upon the re-application of a poultice to the groin, and a spontaneous discharge of pus occurred at the first incision, through a fistulous opening. The fever was relieved after this, and the administration of repeated doses of tartar emetic, each consisting of the $\frac{1}{8}$ of a grain in solution. Afterwards he took the quinine mixture three times a day, and kept on the poultices as long as necessary. On introducing a probe, the abscess was found to

reach several inches towards the anterior superior spinous process of the ilium. But by a continuance of the treatment adopted the patient again improved; the groin healed, and he gradually recovered the use of the limb so far as to be able to walk about the ship with a crutch. Perfect use of it was impossible, for so far as could be ascertained, the head of the femur had been entirely removed by caries, spontaneous dislocation had happened and a false joint had been formed on the dorsum of the ilium. The knee and foot were turned inwards as in accidental luxation, the limb was shortened about three inches, and the patient was barely able to touch the decks with the toes of the left foot. He was, moreover, so unlucky as to again take cold on our arrival at Montevideo, and to have the affected joint injured by concussion with a shipmate. By these mishaps his recovery was retarded, but in April he was discharged to duty, and being lame was sent home during the following summer.

All the varieties of external or tegumentary ulcers I have met with at sea, but the most numerous and difficult of cure were the varicose, indolent and venereal. The first kind were uniformly seated on one or both legs and near the enlarged veins, and the second kind were generally on the same parts, and sometimes of a scorbutic character, having been attended with puffiness and lividness of the limbs, the formation of fungus and a strong disposition to slough, which displayed itself particularly in the La Plata. The cause of this was thought to be as much owing to improper aliment as the coolness and dampness of the climate, rendered more injurious by the strong winds continually blowing up the river from the southern Atlantic; for the ship's crew were supplied abundantly with fresh provisions several times a week. In the treatment of the varicose ulcers, uniform pressure was made upon the limb with a spiral bandage and adhesive strips, numerous metallic lotions and some ointment were applied, the patient was kept at rest, the limb was elevated, and the constitution kept in or restored to a sound condition. The same rules were observed in treating indolent ulcers; the edges were kept down by lunar caustic, pressure and scarification, and they were washed generally with a solution of the sulph. of zinc, sulph. of copper or nitric acid several times a day, or sprinkled with powdered cinchona, which was often very efficient. On the

coast of Brazil this was most observed, and most practised, from the general indolence there of all kinds of ulcers. Hence the cases there were also treated by the free use of internal tonics, among which the preparations of quinine were commonly preferred. Of the ointments, the citrine, red precipitate and Turner's cerate were most efficacious. As in the treatment of abscesses, the blue pill was employed, laxatives were given afterwards, and the patients dieted according to their condition. When they manifested scorbutic marks, lemonade was freely drank, and some of the bitters or tonics were administered.

In the treatment of venereal ulcers, my uniform practice was to apply the lunar caustic once or more, then to heal them up with the black wash, or a solution of sulphate of copper or zinc, and if this failed or was not effectual enough, a little mercurial ointment was rubbed near the ulcers. Sometimes the blue pill was taken, and in a few cases, when the ulcers sloughed, a solution of ʒi or ʒii of nitric acid in ℥viii. of water was applied with certain success, though very severe. If buboes followed the ulcers, they were if possible driven back by leeches or blisters, but these frequently failed, and the latter were objectionable from their inducing permanent induration of the skin as well as thickening of it. My practice, therefore, was generally, to cause suppuration by applying linseed poultices. But at Naples the virus of syphilis was so active and violent, that it quickly impregnated the system, acted like the poison of a viper on the parts, producing chancres and buboes in rapid succession, and I found that the best practice was to induce their absorption or suppuration by frictions with mercurial ointment in the course of the absorbents leading towards them. When constitutional symptoms followed they were combated with the syrup and decoction of sarsaparilla, and sometimes with blue mass in alterative doses. Other mercurial preparations were not employed at all, and salivation was never induced, yet very few instances of secondary syphilis happened, and no case was uncured, nor were any bones made carious, as under the old mercurial mode of treating syphilitic diseases, when patients were made to spit by the quart, according to John Hunter's practice. One of the most remarkable cases of secondary syphilis was that of an officer who contracted two chancres at Malta. They were

healed with the nitrate of silver, black wash and lead water, without any apparent constitutional taint; no buboes formed, and yet six weeks after he was first treated for chancres, and some days after he had returned to duty, a venereal ulcer formed in both tonsils. His diathesis was highly nervous and sanguine, the ulcers were irritable and inflamed, spread extensively, were very hard to cure, and resisted the healing virtues of several gargles, as of borax, sage tea and honey, alone, and united with tincture of myrrh. When these gargles had failed, a solution of five grains of the nitrate of silver, to an ounce of water was substituted, and applied once or oftener every day with a mop. This medicine had the desired effect, and was gradually increased to 10 grains, the patient was put on low diet, took five grains of blue mass every night, and a decoction of radix sarsaparillæ ℥iv, senna ℥i, extract of liquorice the same, extract of sarsaparilla ʒi, loaf sugar ℥viii, in a gallon and a half of water, which was boiled down a third. The next day after taking the blue pill he took a dose of powdered rhubarb. Afterwards some sassafras and mezereon were added to the decoction, but proved irritating to the throat and were omitted. By the above treatment the ulcers were healed in about a month, but the fauces continued inflamed, and a scaly eruption appeared on the scalp, spread downwards over the back, and formed copper colored blotches over all the body and limbs. Not even the penis was exempted, and it became covered at the lower part with continuous scabs. This eruption was as obstinate as the ulcers in the throat, which reappeared in a short time, again healed up, and broke out again four months after they first appeared. The solution of nitrate of silver was perseveringly applied to them, and at last effected a cure with the help of constitutional remedies. In addition to those named, hot bathing in fresh and sea water, was used every day, seidlitz powders were substituted for rhubarb after the blue pill, and the skin kept perspirable by dissolving four grains of tartar emetic in a gallon of the diet drink. His condition was soon improved by this change of treatment, his throat and skin assumed their natural state and he was restored permanently to duty early in August. His recovery was a subject of joy to himself, medical attendants, and colleagues, who had been performing his duties

so long, and would have probably been obliged to do so indefinitely, had he been treated according to the old routine and thoroughly mercurialized; for his irritable, sanguine temperament and partly scrofulous habit, would certainly have been aggravated by such practice, and incurable ulcerations and caries been the probable consequences. His case illustrates too the very great importance of healing chancres immediately. His were not healed, I understand, from his living on shore when they broke out, and their having been allowed to attain a large size before the medicines mentioned were applied.

Of primary syphilis many cases were treated, and most of them occurred in the Mediterranean, whose chief ports abound with every form of venereal diseases. Hence the crews of vessels allowed to go frequently on shore at them, invariably suffered much from them. That of the United States, consisting of 480 men, proved that fact, for about a fifth were infected during her cruise ending in the fall of 1838. Of these, a fourth had primary and secondary syphillis; and sixty, gonorrhoea. In the case of the latter disorder, both on board her and other vessels, as well as on land, I have found that the safest and surest plan of treatment was to combine local with constitutional treatment. This was ascertained by using each method seperately on distinct classes of the patients, learning the average time it took to cure each class, and then doing the same with regard to a third class, treated after the joint method. The average number of days for the last class was fourteen; that of the others much more. Hence the general method of treatment adopted afterwards was to confine the patients to their hammocks, open their bowels with castor oil in preference to any saline purgatives which might render the urine more irritating; and to give gum water or flaxseed tea, sometimes with a grain or two of tartar emetic to a quart, chiefly to create slight qualmishness and prevent indulgence in food. This was strictly farinaceous, and commonly fluid. Leeches were applied under the urethra, or poultices to the whole part, warm bathing was used, and injections of the superacetate of lead, from three to five grains, prescribed. This was gradually increased, now and then joined with the sulphate of zinc, or substituted by the nitrate of silver much diluted. This latter I have employed first, but have seen it produce such

violent effects, as not to be able to recommend it at an early stage and in a large quantity. To relieve chordee, camphor in pills of five grs., and frictions under the urethra with mercurial ointment were frequently employed, the first article acting as an anodyne and sedative, the latter producing absorption of the coagulable lymph, preventing the expansion of the urethra from corresponding with that of other parts. Internally, we likewise gave powdered cubebs, in the doze of ʒi. two or three times a day, the oil of the same article, and balsam of copaiva in its pure state, mixed with sugar, gum arabic, and water, or made into pills with calcined magnesia, which is a very excellent method of using the copaiva, as it prevents nausea, corrects acidity, and enables the stomach to retain a much larger quantity. Hence my patients preferred the pills to any of the balsam mixtures. It mattered not whether they were combined or not with laudanum, tr. of lavender, or sweet spirits of nitre, and especially with the last, which is so ethereal as to cause the eructations to be intolerable to some persons. By the above treatment they were cured, pleasantly, and without stricture, but the former was varied when required, and if orchitis supervened, the affected part was leeched, poulticed, washed with cool astringent lotions until restored to its pristine dimensions, and when these remedies failed, the iodine ointment was successfully applied; but it occasions such excessive pains after the cuticle is stripped off by it, that few patients will submit to its reapplication.

Cutaneous Affections.

Besides the diseases mentioned, some of the most common met with were scabies, herpes, impetigo, acne, and urticaria. Between the tropics the miliaria occurred frequently, scarlatina north of them, and variola in every climate. Pemphigus was of rare occurrence every where; no case of measles was seen on board of any ship. Erysipelas was very rare, and the same may be stated respecting other cutaneous affections not noticed. Of scabies every grade was met with, those only affecting the fingers and arms, as well as those spreading over all parts of the body, and simulating diseases of a different kind. This was properly ascribed to neglect, want of cleanliness, and allowing patients to remain affected with itch without being reported, or

from their keeping aloof from medical advice and using no remedial agents, until the skin had become thoroughly irritated by the animalculæ, and was covered with scabs. From this circumstance they may be attributed to some other cause, and are liable to be thought owing to some of the eruptive disorders. In warm climates from constant excitement kept up in the skin, this blunder is most apt to be made, particularly when the patients keep aloof and apply for no relief until forced by excessive itching. But by careful examination of the hands for the detection of the small vesicular pimples commonly found in itch between the fingers; by the fact of others having the complaint on board, and the absence of constitutional symptoms, we may satisfy ourselves of its existence in the persons being examined. In the treatment of those affected, a speedy cure was uniformly obtained by me from the use of sulphur ointment rubbed on all parts affected twice or three times a day, and the cure of some cases was hastened by giving as often from ʒi to ʒii of the flowers or lac sulphuris in molasses. A solution of the iodide of potash as a lotion is also efficacious, and is preferred by some from its not tainting the air, but I decidedly prefer the sulphur. For the hands, the most cleanly mode of applying it was to work up the flowers with soap, and to use it as the ordinary. To the body the ointment was applied twice or three times a day, and in some cases when the whole skin was infected, I generally gave the flowers in the dose of ʒi in molasses, as often. To relieve the itching immediately, and the inflammation occurring in bad cases, a solution of the super-acetate of lead was used as a lotion. Change of clothes, as much cleanliness as could be observed while using the ointment, and separation from the uninfected, were likewise enjoined, and by strict observance of this treatment the disease was uniformly soon cured and stopped from diffusion. Besides animalculæ causing scabies, I have frequently known seamen to be greatly annoyed by vermin of two kinds, the common louse and crab. For the cure of the complaint caused by the first, the razor, and a thorough washing with soap and water, prescribed by the officers of the line, are usually employed, though as much for disgrace as a remedy. But for that complaint as well as for the one occasioned by the other vermin, none can be used with greater certainty than

mercurial ointment. By rubbing it in the hair, or on the parts affected, a few times, it will always act as a deadly poison to the vermin, at once kill them and remove the itching.

Herpetic eruptions were met with at long intervals, and were mostly of a mild kind, which soon healed by application of the lunar caustic, or citrine ointment; but some cases were not cured until treated constitutionally. The severest case I ever saw was that of a young muscular, plethoric seaman in the Mediterranean, who had had an attack four years before. His whole body was covered with the eruption, in widely spread or circumscribed patches, of a bright red hue, and throwing off thin scales. His scalp was affected also, and the eruption on it became pustular. He was twice on the sick list, the first time for three months, the second for four, and was each time cured with great difficulty. The remedies employed for the purpose were ol. ricini, epsom salts, sulphur and cream of tartar, to relieve the costiveness preceding the disease, the compound decoction of sarsaparilla, blue mass, minute doses of corros. sublimate in the former, the warm bath, and various lotions and ointments. Of the last named, the red precipitate and citrine were the most useful. Of the lotions, one made of corrosive sublimate, from one to two grains in an ounce of water, was by far the best, and during the several terms of treatment the cure was not effected until it had been applied. The eruption then soon began to wither; and when cured, no other relapse occurred to my knowledge. Like treatment locally was best for the ordinary ringworm, herpes zoster or shingles, acne, and impetigo. For urticaria, if induced by improper drinks or diet, as fish, sour fruits, and red wine of Minorca, emetics and cathartics were prescribed, of which epsom salts and tartar emetic to produce a double effect of purging and vomiting, or magnesia to act as an antacid and purgative, were preferred. For urticaria induced by heat of weather, or by excessive exercise, no application was comparable to aqua ammoniæ applied with a sponge to the affected parts. Though stimulating and pungent, it gives instantaneous relief, and hardly needs reapplication. It produces a like effect in other eruptions and external inflammations—erythematous, erysipelatous, and miliary; and even in gouty inflammation of the feet, I have used it with great success. At the same time that it re-

moved this it kept up such excitement of the parts as to prevent it from becoming retrocedent. The action of ammonia is certainly very peculiar; though it stimulates, it also cools, seems to have the power of causing a disgorgement of the capillary vessels by inducing their contraction, and of producing a sedative action in them, and thus to relieve inflammation. Ammonia, moreover, by its rapid evaporation, carries off a great deal of caloric from the parts whereon it is applied, and by that means too acts remedially. But care must be taken that it be not of full strength, and is diluted with water appropriately to the case under treatment. Otherwise excoriation and unnecessary pain may be caused. When this is intense, some spirits of wine, brandy, or whiskey added to the ammonia increase its efficacy.

Scarlatina was seldom encountered, and it always happened, in the United States, during the winter, and on the eve of departure. There was no reason to believe it originated on board ship, but that it was brought from shore. In its nature it differed as it does on land. Some cases were mild, attended with slight fever and eruption; others were accompanied with high excitement at first, then by great prostration. Such was the fact with a seaman of the Brandywine at New York, who died there of scarlatina. In him it was of the most inflammatory kind, in the commencement. His pulse was very full, strong and rapid, v. s. was demanded, but soon after it his system sank, delirium came on, putrid ulceration of the throat occurred, sordes collected on the teeth, and he died on the fifth or sixth day after he was taken sick. His death, however, may be in part ascribed to his being overlooked on the second day after his admission on the list, from his having kept in an obscure place, not applying for further attention, and from the very great number of other patients to be prescribed for during the intensely cold weather we were then suffering. Most of the other cases which occurred were mild, attended with little or no fever, with a white furred tongue, having red papillæ projecting through its fur, and slight inflammation of the skin and throat, and required only laxatives, mild diaphoretics, and astringent gargles, as of alum, borax, sage tea, and tincture of myrrh, to be cured. But after the ship got to sea, another man, who had his throat very much inflamed

and swelled, suddenly sank into a typhoid state and died. He had been unwell a month, was convalescing it appeared, but being confined on the berth deck with a number of persons ill of typhus fever, he evidently was infected with it, had symptoms of pneumonia, and was so much surprised when he heard that the captain's cook, in a cot near his, had just died of the former disease, that he lost all hope, repeated what he heard, "the French cook is dead," sank upon his pillow and died within an hour. He was a novice at sea, and not possessed of the fortitude and peculiar buoyancy of spirit belonging to sailors. Of all eruptive disorders, the most common, the most afflicting among them, is small pox. In all places, in all climes, they suffer from it, and of six ships of war in which I have cruised, it infected the crews of three. Three of them escaped by good luck, if not by precautionary means, but one, the United States, got it on board three times, once before she left New York in 1836, and twice during her cruise in the Mediterranean during that and the following year. The first time, only one case happened, from its being sent to the naval hospital as soon as detected. By the same precaution the Brandywine had previously got rid of the disease, at the same place, and the Delaware was equally fortunate in doing so, at Rio de Janiero. In the last instance, for want of a better place, the patient was put beneath a tarpolin tent pitched for him on a large rock, called Rat Island, opposite the city, and there treated until well. A man who had had small pox attended him, no one else than he and myself were allowed to go on the rock, and though the patient had had the primary fever and staid in the ship four days afterwards, no other person got the disease. This may be attributed to its having been modified by vaccination, of which he had a good mark on his left arm, or to the persons who were near him having been protected, or being insusceptible otherwise. He himself caught the disease merely from being on some barrels with a negro man whom he found on the island of Enxados, and conversed with for some time. The negro was convalescing, and had so little the appearance of having had small pox, that my patient did not think of danger, and allowed him to sit only a foot or two from him; nor did the latter make known these facts until two days had elapsed after he was seized with the primary symptoms, the pustules had

been developed and strict enquiry was made of him regarding exposure to the complaint. Hence the cause of his not having been sooner sent out of the vessel and quarantined.

She also had a like lucky escape from contagion after her arrival in the Mediterranean. A store-ship brought a case of small pox into the harbor of Mahon, and anchored near her and held communication. The case was reported to Commodore Morris, as one of a doubtful character; I was sent to see it and found the patient as scabby as Lazarus, and could not refrain from expressing my astonishment that there should be any doubt of the nature of the case. It was reported to the Commodore, intercourse was prohibited with the store-ship, and though her commander denied the man had small pox, at my recommendation, he was sent to the Lazaretto, in charge of a man protected by vaccination, but who being not entirely so, became infected with varioloid, and had a moderate attack. This proved positively the character of the complaint and it was further proved by inquiry, and ascertaining that a case of varioloid had occurred in the above ship, a few days after she left home. In what manner she obtained pratique at Gibraltar, and again at Port Mahon is still a mystery, and it is uncertain whether it was owing to connivance on the part of the quarantine officers, their being uninformed of the cases which had occurred, or to the nature of the disease not being understood by the medical officer and others of the vessel infected. By keeping the patients in the Lazaretto until well, and then, according to my custom, by burning all things belonging to them, the squadron escaped greater contamination. Of the good effects of separating the sick from the well, and of the contrary from not doing it, proof was afforded on board the United States. While lying in the port of Alexandria a marine on guard at the star-board gangway saw a shore boat approaching with several Egyptians in it. One had marks on his face of recent small pox, the boat was hailed and ordered to keep off, but she got to the foot of the ladder before she did so, and within fifteen or more feet of the sentinel. A week after, the squadron left port he was taken sick of varioloid, got well in a few days, but infected a seaman with genuine small pox. Fortunately the ship arrived at Mahon before it attacked him, he was sent to the Lazaretto, where he staid three weeks, and had the disease in

the confluent form. Yet by observing the precautions mentioned no one got the disease from him.

Of the bad effects of not excluding patients ill of it from the sound, an instance happened during the subsequent winter at Smyrna. A mulatto seaman in watering the frigate there, got small pox from some of the natives at the fountain. At the same time he was seized with a violent catarrh, or influenza, then universal in the crew, and had the other complaint so masked that he was treated for the latter several days, and until by the approach of a lamp, near his face, the eruption was discovered by me on his forehead. As soon as this occurred, he was put out of the sick bay, which was in the bow of the vessel, and hung in his cot on the outside. From there he was soon transferred after some difficulty in getting permission, to the gun deck, and near the fore hatch. Deeming that an improper place for him to remain in, as many men hung their hammocks near him, and having in vain recommended his being sent on shore, I applied for the poop cabin which was vacant, to accommodate him. The commander tried to prove that the disease was more apt to spread from there, than the gun deck, and resisted all persuasion. At last on my informing him that he must then take the responsibility, and I would send a letter to that effect, he yielded and the man was put into the cabin. It was too late, he died in a day or two, and was thrown through a port hole into the Egean sea. A sailor who had slept next to him on the gun deck, got the natural small pox from him, and before and after the ship reached Mahon, and we were able to separate him from the crew, and send him to the Lazaretto, ten others, eight men and two officers, were infected.—From a precisely similar circumstance, the small pox got on board the Macedonian on the eve of her departure from Brazil, in September, 1828. Two merchant seamen, at Rio, came to her for passage home. One was Freeman, a mulatto, and in two or three days afterwards, on his presentation at the table of Surgeon B. Ticknor, who was prescribing for the sick on the gun deck, he was found to be feverish, to have his forehead swollen and covered with variolous pimples. The surgeon forthwith got up, and reported the case to Commodore Biddle, who sent the patient without delay to the city hospital. The frigate left port, the south east

trade wind soon arose, swelled her sails, and wafted her homeward; she bounded over the waves, dashing the snow white foam far from her sides. All hearts were glad, the merry sailors in the evening collected on the forecastle, and danced to the inimitable music of Miller, the sailor fiddler, and Jack Williams, a lively young negro, capered a jig to the admiration of every bystander. The next evening the same merriment was repeated, but the day after, an invalid, James Grant, who was consumptive, and had been sent from the corvette Boston to go home in the frigate, was seized with small pox. He was in no manner protected. He had neither been inoculated nor vaccinated, and most unluckily had had his cot hung in the sick bay next to the hammock of the infected mulatto. This apparently trifling incident proved a most disastrous one. Grant had the disease in the most terrible manner, the pocks on his face perfectly coalesced, became almost black, and his whole body seemed to have become decomposed, such was its fœtor. It was in vain that he was put behind a screen, abaft on the starboard side of the gun deck, and there only approached by the nurses and medical officers. The whole ship was tainted, the air even in her fore chains, outside of her, smelt of him, and every one in her liable to the contagion became affected. Inoculation was resorted to for protection as soon as the scabs could be had. On the 14th day he died, was quickly wrapped up, and lashed in his cot, with four 18lb. shot in the foot of it, was pushed over a gun, and thrown into the sea, through one of the nearest ports. No one save attendants witnessed the burial, and after all the articles used by him had been thrown after him, the deck was cleaned and sprinkled with vinegar.

After such care we hoped no other case would happen. The crew the day after had become as jolly as ever, and Miller's music was again heard. A sudden stop a second time was put to it. On the fifth day after Grant's death, Moses Nicholas, cook of the cockpit, was seized with the fatal disease, which was so violent that the eruption was suppressed, his skin became covered with numerous little pimples like those of flee bites, and he died on the seventh day, vomiting and purging blood. While he was gasping for breath, the jolly Williams, a fellow cook, who had the primary fever, got out of his hammock,

sat upon a shot box, and seeing his friend expiring, cried out, "a fair word to you Moses!"—returned soon to his hammock; in a few days he died of the fell disorder, and was likewise consigned to the deep. Five others shared the same fate, some after a short illness, others after a protracted struggle. Of the former was Samuel Parker, a marine, whose skin became purple, put forth no pustules, and lost its cuticle in large flakes. Of the latter was Alfred Curtis, a sergeant of marines, who lingered a month, and died after suffering greatly from an enormous sloughing ulcer at the lower part of his loins, which had reached a large size before he complained of it, and it was discovered. Previously he had had ulceration of the left leg, and subsequently a large abscess burst beneath the chin. Altogether forty of the crew and officers took small pox in some form, from the mishap of taking Freeman on board. Of that number, seventeen had it naturally, three had it modified by inoculation, and twenty by vaccination. Some of these persons had it very lightly; one of them would not keep from duty, nor come on the sick list, and several had merely slight fever and a few pocks which soon disappeared. Of the crew more than a hundred were inoculated as soon as the virus could be got, and only one of that number had the disease. But several afterwards had headache, pain in the loins, and immense scabs upon the parts inoculated. That on the arm of the first lieutenant, the present Commodore Salter, continued to grow until it was about the size of a half dollar, and yet he had no observable constitutional affection. The effects upon myself were simply languor and uneasiness in the loins. No one of those protected died, and those who were so by vaccination had the mildest symptoms.—Desquamation in the latter came on soonest, and, in the worst cases, was completed in a few hours. Most of the natural cases were confluent, but one of them, that of Alexander Neale, or young Turner, seaman, was remarkable for the very small number of its pustules, and their great perfection. He got well, and when with me in the Delaware, twelve years afterwards, retained no visible marks of small pox, which cannot be asserted of many who had only had varioloid. The last person who took the disease in any form was admitted on the sick list upon the 30th of September, or the fifteenth after the death of Grant. Thirty

of the cases occurred within ten days from it, and within twenty from the time of the eruption being well developed upon him.—We may therefore conclude that the period of incubation was on an average ten days, though sometimes not so long, as in himself, who shewed the eruption nine days after it appeared upon Freeman, unless the former caught the contagion from the latter during the primary period before the eruption was detected.

Treatment.—From the oppressed condition of the patients, and the malignant type assumed by the complaint in some of them, depletion was mostly avoided; no blood was drawn from any one, the bowels were gently evacuated with castor oil or epsom salts, and calcined magnesia; an emetic was given in four of the cases, three of which were cured; cream of tartar in solution for a drink, pills of calomel, pulvis antimonialis and opium were administered frequently. Sometimes the last was left out, and spirits of nitre and camphor were used. To remove the very acute pain in the loins, suffered in most cases, laudanum in large doses was prescribed. When the sick became prostrated, port wine sangaree, and an infusion of powdered cinchona, flavored with elixir vitriol and tincture of cinchona, and having a fourth part of whiskey added to the water, were taken. The diet was farinaceous, consisting of rice and tapioca, chiefly, and cooling drinks were allowed. As much attention as possible was paid to the general comfort of the sick, their mouths were freed of the viscid saliva collected in them and the fauces; their clothes and bedding were changed, their bodies washed; lead water and dressings applied to sore parts, and the three medical officers besides the care they took of the sick during the day, divided the night into as many watches, and attended to them during it, the surgeon taking the first one, assistant surgeon Henry S. Coulter, and myself, the mid and morning. But the sick were so crowded, on the gun deck, where all the worst cases were hung in cots and hammocks, to escape the heat on the berth deck, rendered greater by the ship being between the tropics, and crossing the equator, that it was impossible they could all be made comfortable. The want of enough good bedding, the necessity of using linen almost as coarse as sail cloth, and a tempest of three days duration, from the south west, and near the line, rendered that more difficult. We were also

not provided with as good a supply of medicines, provisions, and other necessaries for the sick, as we should have been, had such an epidemic been anticipated.

In this way, then, we must account for the large proportion of deaths among those affected with natural small-pox; which, including that of Freeman, who was said to have died on shore, amounted to nine, or fifty per cent. In the treatment of the cases which subsequently in various stages fell under my special care, the rule observed was to remove the most prominent symptoms as they occurred. If action was high, blood was drawn, generally, or locally, the bowels were well evacuated with epsom salts alone or combined with tartar-emetic. This was given afterwards, in the quantity of one-eighth of a grain with half an ounce of the spiritus mindereri every hour during the continuance of the primary and secondary fever, anodynes, as laudnum and sulphate of morphia in the dose of one-eighth of a grain were taken to procure sleep and relieve pain; and lemonade, cream of tartar in solution, rice and barley water, and flaxseed tea, were drank freely. Rice boiled in milk, soup, arrow-root, and other farinaceæ were allowed for diet.

In most cases a weak solution of acetate of lead in water was applied to the eyes to remove swelling and diminish the inflammation; gargles of stewed molasses and vinegar, borax, sage tea and honey, and of tincture of myrrh and alum and water, were used sometimes, and applied to the fauces to subdue irritation and remove the swelling, as well as to clear them of the accumulations of mucus and sordes. The whole body was sponged frequently with warm water, the feet bathed in hot, the pocks, especially those on the face, were early lanced and evacuated, the face was kept covered until well with a rag dipped in camphorated oil, to protect the former from air and light, the mouth was well cleansed, and the apartments of the sick were as well ventilated as necessary. From the severe catarrhal symptoms attending the cases originating at Smyrna, expectorants were given in them, and a solution of liquorice and tartar emetic was found best adapted to them.

Severe local pains were relieved by leeches, and these were frequently applied to the temples and loins, which were always much affected in the worst cases of small pox.

By the above treatment, altered according to circumstances, the seaman, Wm. Reed, who caught the disease at Smyrna, was the only one who died, and his death may properly be ascribed, in part, to the small-pox having been preceded and accompanied with the influenza, which fixed itself on the lungs and larynx, masked the more dangerous affection; and rendered a greater loss of blood necessary than would have been drawn had he been affected with small-pox alone. He was bled three times within the first four days of his illness, had six leeches applied to the larynx, twelve to the small of the back, and sixteen to the temples, to relieve him of delirium. Altogether he lost from the arm forty-six ounces of blood, and about seventeen from leeches, reckoning that each one drew half an ounce, which is a moderate allowance for them. Notwithstanding the loss of so much blood, the inflammatory symptoms kept up almost without intermission; the face and throat swelled, the pustules formed and were confluent, on every part of his body, and he lived ten days after he was taken under treatment.

On Obstruction of the Pharyngeal Orifice of the Eustachian Tube. By JNO. NEILL, M. D., Surgeon to the Pennsylvania Hospital.

The accompanying wood cuts represent a condition of the pharyngeal orifice of the Eustachian tube, which I believe has hitherto been overlooked. There will be seen in each of the specimens figured, a growth which completely overhangs and occludes the orifice of the tube, from its posterior and superior border.

Fig. 1.

Fig. 1, a. The growth seems to consist of a thickened fold of mucous membrane, in which the mucous follicles are very distinct.

Fig. 2.

Fig. 2, b. The structure resembles more in appearance and in size the tonsil, but when carefully examined, is found to be com-

posed of several folds of mucous membrane, thickly studded with mucous glands.

Fig. 3.

Fig. 3, c. This mass also resembles the tonsil in structure, presenting those wide-mouthed follicles which are characteristic of the gland.

The subjects from which these specimens were obtained were not known to be affected with these peculiarities previous to death, nor were they selected for the purpose of illustrating this condition; and, therefore, it is either a remarkable coincidence that this pathological formation should be found in three instances under such circumstances, or it is to be inferred that the condition is a very common one.

I am inclined to think that this condition of the orifice of the tube exists quite frequently, especially in children, and that it is a common source of temporary deafness.

How many cases of deafness in children are considered to be dependent upon enlarged tonsils, and yet how few are the instances in which the tonsil is sufficiently enlarged to encroach upon the orifice of the tube? In fact, the distance between the tonsil and the orifice is so great as to induce some to believe that enlarged tonsils are never the cause of deafness; and yet we certainly do find this enlargement coexistent with deafness, though it may not be the cause of it. Mr. Wilde says, "I have never seen a preparation showing the greatest possible degree of enlargement of the tonsil, in which it pressed upon the trumpet-mouth of the Eustachian tube. Anatomists will, therefore, find it as difficult to believe that enlarged tonsils produce deafness, as practical

surgeons to believe that their removal can in any way relieve the loss of hearing. Even in cases of cynanche tonsillaris, when so large a collection of matter forms in the gland that suffocation threatens, there is no deafness. When deafness co-exists with enlarged tonsils, I believe that it is produced by the thickening of the mucous membrane extending into the Eustachian tube or into the tympanum."

The structure which I have described is so closely allied to the tonsil in its nature, that it is perfectly natural to suppose that it would be enlarged under the same circumstances by which the tonsil is enlarged; and thus we may have in it the real cause of deafness so often attributed to the tonsil. Besides, from the nature of the tissue, there is no difficulty in supposing that this hypertrophy of the mucous membrane around the orifice may exist, independently of any enlargement of the tonsil. That this structure is a hypertrophy of the mucous membrane is evident from its existing on both sides in each case, whereas, were it a polypus or an epithelial formation, it is hardly probable that it would occur on both sides at the same time.

It is somewhat remarkable that such a structure has not been noticed in the frequent catheterizations of the tube. In two of these specimens the orifice (*o*) was so concealed that a probe could not be introduced from the pharynx even, without elevating the overhanging mass, and it would have been next to impossible to have introduced a catheter in the ordinary manner to determine the permeability of the tube.

The usual mode also of determining the permeability of the tube, by closing the nostril and mouth and making forcible expiration must fail, when such a condition of the orifice exists, although the upper part of the tube be entirely free from constriction. Forcible expiration, would, in fact, force this growth more tightly into the orifice, as a cork into the mouth of a bottle.

The position of this morbid structure is such that it cannot be reached by the knife, nor could caustic be applied very satisfactorily through the nose. The only manner of reaching the difficulty would be by a properly curved caustic holder introduced through the mouth.

Inspection of these specimens may justify the following reflections.

1. That there is a pathological condition of the orifice of the Eustachian tube hitherto not described.
2. A form of deafness may depend on its existence, which has been ascribed to enlarged tonsils.
3. An explanation of a difficulty sometimes preventing catheterization of the tube.
4. The true mode of cure in such cases.

On the Treatment of Tape-worm by the Oil of Pumpkin-seeds.
By Henry S. Patterson, M. D., Professor of Materia Medica in the Medical Department of Pennsylvania College.

In the Medical Examiner for October, 1852, I reported a case of radical cure of Tænia by the use of an emulsion of pumpkin seeds, after the Ol. Terebinth, and even Kousso had signally failed. Several other cases have been reported, both before and since mine, all going to establish the efficacy of this new remedy. Should it prove as generally successful in expelling the worm as the cases indicate, it will become a valuable accession to our means of treatment in a troublesome and often obstinate affection.

The seeds of the common pumpkin (*Cucurbita pepo*,) consist of a leathery white envelope, enclosing an oily albumen of a slightly greenish tinge. They are inodorous and have a sweetish, mucilaginous taste. Rubbed up with warm water or milk, and sweetened, they form a very pleasant emulsion; and this is the way in which they have generally been administered. They abound in fixed oil, which is readily yielded on expression, and appears to be the only constituent of any importance. Conceiving this oil to be the anthelmintic principle, I determined to use it in the first case of Tænia I should encounter. A quantity was obtained, by cold expression, by our accomplished pharmaceutist, Mr. Frederick L. John, of Race street. From four lbs. of the seeds he procured ℥xiv of oil, but he has no doubt that, if the operation were conducted on a larger scale and more carefully, the yield would be from thirty to forty per cent. The oil is clear, transparent, of a light brownish green color, with a slight oily odor, and a perfectly bland taste, like that of the oil of sweet almonds. It has now been kept some ten months, (in well-stoppered bottles,) and is perfectly sweet and bland.

No case of tænia has occurred in my own practice, but in May last I learned from Mr. Jno. C. Lyons, an intelligent member of the medical class of Pennsylvania College, that a poor woman in his neighborhood (Kensington) labored under the disease, and had asked his advice. I requested him to use the pumpkin-seed oil, which he did, and with the happiest result. Causing her to fast rigidly for twenty-four hours, he gave her ℥ss of the oil in the morning, and in about two hours ℥ss more. This produced a slight disposition to looseness of the bowels. In two hours after the last dose, ℥i of castor-oil was given, and purged freely, bringing away a considerable quantity of the worm. From that period until the present, (September,) she has remained entirely free from every symptom of verminous irritation, and there can be no doubt that the worm was altogether destroyed.

Tænia is of so rare occurrence with us, that no individual practitioner sees enough of it to enable him alone fairly to test any medicine. I therefore beg leave to call the attention of my medical brethren to a remedy readily obtained, cheap and pleasant, and which I believe will be found quite efficient.

On the Dormant Vitality of the Tobacco Seed. By W. S. Stoakley, M. D., of Northampton county, Virginia.

A gentleman in my vicinity informed me that in cultivating his land, last spring, he had occasion to plough it very deep, and in doing so, he came in contact with something beneath the surface, which he found by examination to be a brick wall, the ground-work or cellar of a building. Wondering that he had not discovered this before, (the land having been cultivated for a number of years by him and this having lain there unobserved up to this time,) he came to the conclusion that it might be a bank of excellent manure. He resolved to cut it out. He did so. After digging several feet below the surface, he came to this layer or *stratum* of manure (a mixture of lime and earth) which he immediately carted out into his field. In a short time he observed, where he had placed this manure, a beautiful and thrifty plant, which, after it had attained some size, he found to be a Tobacco plant, the seeds of which must have lain dormant "up-

wards" of a century. For it has been longer than that since tobacco was raised in this county. *

The farm on which this "subterraneous wall" was found, was *first purchased and paid for*, in *tobacco*, as will be seen from the following note from "Howe's History of Virginia:

"The labor of the colony, which had been for a long time misdirected in the manufacture of ashes, soap, glass, and tar, in which they could by no means compete with Sweden and Russia, and also in planting vines, which require infinite labor and attention, and for which subsequent experiments have indicated the climate to be unfit, was at length directed, by the extended use of *tobacco* in England, almost exclusively to the cultivation of that article. This commodity, always finding a ready price, and affairs being now so regulated that each one could enjoy the fruits of his labor, was cultivated so assiduously as to take the attention of the planters too much from raising corn, so that it became scarce, and supplies had again to be looked for from England, or purchased of the Indians. The fields, gardens, public squares, and even the streets of Jamestown, were planted with tobacco, and this becoming an article of universal desire, it became, to a great extent, the circulating medium of the colony. Not only private debts, but salaries and officer's fees were paid in tobacco; and the statute-book, to this day, rarely mentions the payment of money, that it does not add, as an equivalent, 'or tobacco.'"

Now, you will perceive from this, that it is probable that the seeds of this plant may have lain dormant for more than two hundred years. This wall, with which these seeds were *buried*, was on a portion of the farm that had been cultivated by past generations, and had not been discovered up to this time. Is it not possible that they may have lain buried from the first settlement of this part of the State?

I send this to you, Messrs. Editors, as an illustration or verification of an interesting physiological fact. "It is not sufficient that the organizable material be perfect; the influence of certain external agents are requisite to call into action the peculiar properties of the organized structure, viz: heat, light, moisture, electricity," &c.

* It was once the principal staple, but has not been planted for years.

BIBLIOGRAPHICAL NOTICES.

A Practical Treatise on the Diseases of Children, by J. Forsyth Meigs, M. D., Lecturer on the Practice of Medicine in the Philadelphia Medical Association, etc., etc. *Second Edition, Revised and Enlarged.* Philadelphia, Lindsay & Blakiston, 1853. pp. 711.

This work is a republication, with considerable additions and modifications, of one of the series of "The Medical Practitioner's and Student's Library." The original edition having been exhausted for some time, a second has now been brought before the profession as a separate and distinct treatise. The additions consist of an Introductory Essay on the Clinical Examination of Children, and an article on Atelectasis Pulmonum, or imperfect expansion of the lungs. The articles on Croup, Bronchitis, Pneumonia and Scarlet Fever, have been entirely re-arranged and in many parts re-written; that on Measles has been much added to; and the subject of Tracheotomy in Croup has been discussed at considerable length.

The essay on the clinical examination of children is a very proper, we might almost say, a necessary introduction to a work of this kind. The diagnosis of infantile affections is replete with difficulties to the young practitioner, and these can never be overcome unless he knows what to observe and how to conduct his examination. The whole article will repay a careful perusal. We would particularly commend to the reader's attention, the passages under the head of "The Cry," and "The state of the cutaneous surface," as containing much valuable information. It is evident that Dr. Meigs has paid great attention to the subject of Semeiology. His Essay is not a mere digest of the opinions of authoritative writers upon the subject, but is replete throughout with remarks which show accurate and careful observation.

No physician of the present day should be ignorant of the important part, Atelectasis plays in the diseases of children. Its frequent occurrence in early childhood from various causes, and its connexion with Catarrh and Bronchitis, are admitted by all

who have studied the subject. Dr. Meigs makes two divisions of the affection. 1. Congenital Atelectasis, in which larger or smaller portions of the lung have never been penetrated by the air: a continuation, in fact, of the fœtal condition; and 2d, Collapse of the lung or post-natal Atelectasis. As a sample of his mode of treating the subject, we extract the following:

"When, as indeed, most usually happens, collapse occurs in the course of bronchitis, it is associated of course with the symptoms of that disease. The bronchitic symptoms have lasted in their usual form for several days, having been marked by sonorous, sibilant, and subcrepitant râles, when suddenly, or in the space of a few hours, the breathing becomes much worse, the pulse rises in frequency but becomes small and feeble, and certain changes take place in the physical signs which are very important. The subcrepitant râle continues to be heard, but it is associated now with prolonged expiration, and a little later with bronchial respiration, which, however, is of a different kind from the bronchial respiration of pneumonia, being distant and smothered, instead of near and metallic, as in that disease. The percussion becomes at the same time, dull and obscure, but never, scarcely, to the same extent as in pneumonia. The general symptoms are those of exhaustion, rather than of high reaction. The surface is pale or slightly bluish, the skin is either natural, slightly warmer than usual, or coolish, the strength is very much reduced, and the child appears more seriously ill, and particularly more oppressed often than the amount of bronchitis present would seem to explain."

The causes, symptoms and anatomical appearances of both forms of the affection are described with great fullness and precision. In the treatment of collapse, he recommends warmth, nutritious diet, the use of mild stimulants and tonics, and the external application of revellents. When it occurs in the course or towards the termination of severe bronchitis, in addition to the above, he advises the application of dry cups or mustard poultices to the chest, and the use of emetics two or three times daily, unless they are found too exhausting. Electricity and insufflation of the lungs are not mentioned. In regard to the latter, MM. Rilliet and Barthez state that it is difficult to imagine that it can be hurtful in Atelectasis. They state their belief also, founded on Joerg's experiments, that carefully used in the first few days of the disease and following the inspiratory movements, it would be able to restore the lung to its normal condition. In the paroxysmal form of the disease, where other means had been used unsuccessfully, we should think it well worthy of a trial.

Dr. Meigs fully adopts the views of MM. Legendre and Bailly,

regarding the nature of what was formerly termed lobular pneumonia. Their researches, with those of Dr. Gairdner, and his own investigations of the subject, have convinced him that in the great majority of cases, the affection in question was bronchitis complicated with collapse of the lung and not inflammation of the pulmonary parenchyma.

In relation to the views held by writers previously to the discovery of the true pathology of this disease, he says:

"The peculiar character of the lesions met with in many of the supposed cases of pneumonia, had often drawn attention and been commented upon, before their real nature came to be understood. The points of difference between these alterations and those of true pneumonia, were particularly noticed by MM. Denis, De La Berge, Rufz, and MM. Rilliet and Barthez, and Dr. West. In fact, M. Rufz, and MM. Rilliet and Barthez, both approached very near the truth in regard to these lesions, each comparing them, but the former at an earlier period than the latter, to the condition of the lung of a fœtus that has never breathed. The latter writers, in their article on pneumonia, have described a condition of the lung which differed so much from ordinary pneumonia, as to create a great difficulty in their minds as to its true nature, and to it they applied the term carnification. They were on the very verge of detecting its real character; they did in fact suggest its real character, but were so possessed with the idea that it must be the result of some inflammatory action, as to neglect to pursue their own suggestion, but endeavored to explain the condition on the ground that it was 'one mode of termination of pneumonia or else chronic pneumonia.' The following passage, quoted from their work (T. 1, p. 74), will show how closely they approached the truth: 'The first idea that enters the mind on examining this tissue (carnification), is, that it resembles the lung of a fœtus that has not breathed; we should feel inclined to say that the pulmonary vesicles had not yet been dilated under the influence of the thoracic expansion, and had not, therefore admitted air into their interior, or rather, it would seem as though they had been obliterated by some attack of disease, perhaps inflammation, without, however, remaining engorged, and after having lost the power of dilatation.'"

We regret that he makes no mention here of Dr. Gerhard's valuable paper on the pneumonia of children, published in 1834, in the American Journal of the Medical Sciences. This, be it remembered, was four years previous to the issue of the treatise of MM. Rilliet and Barthez. In that paper, second series, Dr. Gerhard accurately analyzed the symptoms, physical signs, and anatomical appearances of twelve cases, occurring in children between two and six years of age, of what he then styled pneu-

monia, but which were, without doubt, cases of bronchitis combined with collapse of the lung. The results he obtained were highly interesting and unexpected. The essential nature and cause of the lesion found in every instance, and to which he gave the name of lobular induration, were evidently no more understood by him than was carnification by MM. Rilliet and Barthez. It is now known that Dr. Gerhard was too exclusive in his restriction to children above six years of age, of pneumonia, as it is found in adults. With this reservation, his paper, by far the best of its time, may be consulted even now with advantage.

Of Pneumonia, Dr. Meigs makes two divisions, lobar and partial, preferring the latter term to that of lobular for obvious reasons. During the last four years he has observed 37 cases. Of these 33 were primary and 4 secondary; 19 occurred in children under five years of age; 18 between five and eleven years. In two cases there was double pneumonia, unilateral in all the others; 13 had the upper lobe affected, and 20 the base; of 50 cases, 37 of which were observed during the last four years, two died. The treatment is the same as that given in the first edition.

The subject of Scarlet Fever seems to be a favorite with Dr. Meigs, as he has devoted sixty-four pages to its consideration. He discards, we think without good reason, the old distinctions of simple, anginose and malignant, and substitutes for them the terms mild and grave, according to the severity of the disease. Of the former, mild, he has had 144 cases; of the grave 41, of whom 23, or 57 p. ct. died. The whole subject of scarlet fever, its complication, sequelæ, and treatment are fully and elaborately discussed.

In closing our brief notice of Dr. Meigs' work, we have great pleasure in bearing testimony to its high merit, and especially to the improvements introduced into the present edition. There is certainly, now, no work in the language in which the leading diseases of children are more agreeably, clearly, and faithfully delineated. And, in expressing our regret that some affections peculiar to childhood, have been unnoticed, we feel bound to admit the force of the author's apology for the subjects untouched—"the want of time and opportunity to make use of the materials he has collected." In a succeeding edition, "he hopes

and expects to fill up the omissions of the present one;" and we have little doubt that the fulfilment of this pledge will be called for at an early day.

Practical Observations on Aural Surgery and the Nature and Treatment of Diseases of the Ear. With Illustrations. By WILLIAM R. WILDE, Fellow of the Royal College of Surgeons in Ireland, Surgeon to St. Mark's Ophthalmic Hospical, etc., etc. Philadelphia: Blanchard & Lea, 1853, pp. (with Index,) 475.

Of this valuable monograph we may most unhesitatingly say, in the language of the American editor, "that it will fill a void in our medical literature which has long been felt, and which no work published in this country has ever been adequate to fill." Aural Surgery has, indeed, as the author well observes, been long encompassed with a shroud of quackery, medical as well as popular; and we hail, with no ordinary satisfaction, the appearance of a work, in which a successful attempt has been made, "to lay down just principles for an accurate diagnosis of Diseases of the Ear; to rescue their treatment from empiricism, and found it upon the well established laws of modern pathology, practical surgery, and reasonable therapeutics."

The qualifications of Mr. Wilde for the proper discharge of the task which he undertook in the Treatise before us, are thus graphically portrayed by his friend and former pupil, the American editor, Dr. Addinell Hewson:

"Possessed of extraordinarily quick perceptive faculties, highly cultivated by early discipline and use, of mature judgment and consummate skill, of untiring zeal and industry, and of high literary attainments, few surgeons have had better opportunities, or could have made better use of them, than Mr. Wilde. St. Mark's Hospital for Diseases of the Eye and Ear, the field of his public labors in these branches, is an institution of his own creating, which has been in operation nearly ten years, and is now one of the largest and best conducted of the kind in Great Britain. All those who have had the good fortune of attending his clinics, and observing his practice there, will willingly bear testimony to their admiration of his talents."

We should be glad to be able to quote at length Mr. Wilde's forcible allusions, in his Introductory chapter, to the reprehensible neglect with which the subject of aural diseases has so long been

treated by medical men. Our management of this class of affections has, indeed, been characterized by an empiricism, of which we should feel heartily ashamed in prescribing for the lesions of other organs of the body. We have been content, (as Mr. Wilde remarks, with a justness which we are satisfied our readers will generally acknowledge,) "theoretically to believe, and practically to observe, that we know nothing about the diseases of the organs of hearing." And we fear, that but too many of us must recognize a faithful portraiture in his witty description of the ordinary routine of practice in such cases:

"First syringing with hot water and soap, either Castile, soft, yellow, or old brown Windsor, *in the hope* that the deafness or noise in the ears might arise from a collection of hardened wax;—then setting the digestive organs to rights by purgation, and 'a course of bitters,' lest the affection might be 'owing to the stomach.' . . . . . "Next in order, blistering behind the ears is tried, in order to draw away some peccant humor, that had, perhaps, accumulated round the delicate organ of hearing. These and such like methods failing to give relief, stimulants, often of a very acrid nature, are poured into the external auditory passages, either to restore the reaction,—under the impression that what is a mere attending symptom is the disease,—or to excite or rouse the dormant nervous power; and hot tinctures, turpentine, creasote, and pungent essential oils, are applied to the external surface of the tympanal membrane without mercy. Some practitioners resort to more palliative means, recommending warm almond oil to be dropped into the ear at bed time, or *eau de Cologne* to be rubbed upon the side of the cheek adjoining the auricle, at the same time advising a little black wool to be retained in the meatus, in order to preserve the organ free from cold. To give, however, fair play to the latter remedy, it should be prescribed in full, and according to the old popular superstition, but one which is still extensively resorted to,—the wool should be procured from the left fore-foot of a six years' old black ram! Some advise a slice of fat bacon to be inserted into the meatus every second night; and glycerine is now the fashionable remedy. All these means having failed to give relief, the patient is frequently recommended—an easy mode of getting rid of him—to give galvanism and electricity a fair trial; and if they do not succeed, change of air and scene, sea-bathing, or a 'course of waters' at some of the fashionable places of resort for that purpose is prescribed. Despairing of relief from the legalized practitioner, and getting disheartening opinions from men of eminence and repute, we need not wonder that suffering patients throw themselves into the hands of quacks and nostrum-mongers."

Mr. Wilde's First Chapter is occupied with an extended and very interesting *Bibliography* of aural surgery. Among modern investigators he particularizes Mr. Toynbee as entitled to the first place.

"The labors and investigations of Mr. Toynbee have effected more for aural pathology than those of all his predecessors either in England or on the Continent. He commenced at the right end, and has travelled in the proper direction. He has brought to bear upon the subject the true principles of science, and with the assistance of the microscope,—the aid of every modern artistic appliance to assist him,—accustomed to habits of minute dissection, patient research, and careful observation,—he has accumulated a mass of facts upon the morbid anatomy of the organs of hearing that must lay the foundation for a more rational mode of treating the diseases of those parts than has heretofore been resorted to. Mr. Toynbee has already recorded the results of the dissection of the ears of about 750 persons sent to him for examination, but of which number not more than sixty or seventy were from persons the history of whose deafness was known.

Mr. Toynbee has labored extensively, and with effect, to discover and describe the post mortem appearances which disease has produced in the organ of hearing; and I trust he will long continue to prosecute, with the same avidity, the same honesty of purpose, and an equal amount of critical acumen, his valuable researches. Morbid anatomy, however, is one thing—pathology another. The dead subject upon the dissecting-table teaches the student not disease, but the results of disease. It avails little that the hospital pupil should have pointed out to him, in the dead-room, the violence which sudden accidents may have caused, or the ravages which slow disease has produced in the various organs or textures of the body; it matters not to what extent the microscope may exhibit the wide-spread lesion, or chemical tests disclose morbid products, unless the cases have been observed during life, and the progress of disease previously noted at the bedside. Therefore it is that the School of Vienna,—where a dozen bodies from different parts of the Great Hospital, but the histories of which are unknown, are sometimes cut up, and their post mortem appearances displayed in the lecture-room on a morning,—may, under the able teaching of Rokitansky, Engel, and others, teach morbid anatomy (pathology so called), but does not produce many practical physicians.

Mr. Toynbee's researches prove the position which I long ago advanced, and which from year to year I have been in the habit, not only of teaching theoretically, but practically demonstrating in my clinical lectures,—that the great majority of diseases of the ear producing deafness have their origin in inflammation of one kind or another. Every day's experience confirms me in this opinion; and the cases which I now publish, will, I think, corroborate that view of the subject. Mr. Toynbee has not yet published any separate work upon the ear, but has contributed his observations on the Anatomy, Pathology, and Treatment of the Organs of Hearing to the different societies, and also to the periodicals of London. Among the latter may be mentioned chiefly, the Philosophical and Medico-Chirurgical Transactions, from 1843 until the present date. He has also written several valuable papers in the Medical Times, Lancet, Provincial Journal, and Edinburgh Medical Journal."

A considerable space in the Bibliography chapter is devoted

to the "*Glycerine Cure,*" which Mr. Wilde considers as very much of a humbug. And immediately following his exposure of the worthlessness of this fashionable remedy, we find some apparently well-merited strictures on a charlatanism which has had some run in England, viz., Dr. Turnbull's cure of deafness by the application of veratria to the external meatus and the parts joining the auricle. Mr. Wilde's manly tone on the subject of the aural quackery of the day, within the ranks of the profession, is highly commendable.

Chapter II. relates to *The Means of Diagnosis.* In exploring or operating upon the external auditory passages, we find that he employs the *tubular* specula of Gruber, of Vienna, which are merely "conical silver tubes of different calibres, an inch and a half long, five-eighths of an inch wide at the greater aperture, and varying from two to four lines in the clear at the smaller extremity." In using the specula, he prefers direct sun-light to all artificial illumination, and discards all the instruments with prisms, lamps, &c., as unnecessary. Attempts to dilate the auditory passage by means of instruments, Mr. Wilde justly characterizes as "showing a want of anatomical knowledge in their inventors, for the most any speculum can effect is to straighten the external cartilaginous portion of the tube, and thereby allow the light to play upon the interior."

In connection with the subject of *Eustachian catheterism*, Mr. Wilde (after describing the instrument which he is in the habit of using, and the mode of applying it,) holds the following cautionary language:

"I know few subjects upon which there is more general ignorance than the value to be attached to Eustachian catheterism, or the best mode of employing it. Some writers would lead us to suppose that this operation is of use in a far greater number of aural diseases than, according to my experience, is the fact. In order to facilitate our diagnosis, they would have us explore the middle ear by the air *douche*, a jet of water, or a solid instrument, in almost every case that presents. Errors of commission are, in both medicine and surgery, I believe, of much greater injury than those of omission; and the introduction of a foreign body into the Eustachian tube, forcing a volume of cold air, or injecting a quantity of fluid, even warm water, into the cavity of the middle ear, as some recommend and say they practise, is in nearly all cases, while inflammatory action is going forward in the parts submitted to the process, unnecessary and frequently injurious. Again, the mode in which I have heard both patients and bystanders speak of instruments—cathe-

ters of various kinds, gum-elastic, and metallic, and even solid sounds, some of the latter much larger than the bore of the aural end of the Eustachian tube even in the dry bone—being introduced into the middle ear, in order to explore that cavity, to wash out its contents, or to break up collections of mucus within it, or to dilate strictures and contractions of the tube itself, convinces me that the desired object was not, fortunately for the sufferers, obtained. Even Kramer speaks of pushing a catgut bougie, introduced through the Eustachian tube, "between the handle of the malleus and the incus!" People are, however, beginning to find that this attempt—for I know in many cases it is only an attempt—to force solid or fluid substances into the cavity of the drum, is as ineffectual to remove deafness as the almost indiscriminate excision of the tonsils—since preserved in pickle-pots—recommended for a like purpose a few years ago, has proved to be. I have heard of cases in which the middle ear has been said to be explored by such mechanical means, even in this country, and I have been shown steel sounds manufactured for the purpose. Such instruments are, however, with the exception of the tearing and inflammation which they may cause in the nasal extremity of the tube, harmless, for they could not by any possibility, even in the dead subject, be passed through the upper end of the Eustachian tube. We should bear this rule ever in remembrance before exploring the middle ear; it is one which Sir A. Cooper observed to me many years ago, and I have ever since acted upon it:—Whenever the patient is himself able to inflate the tympanum, never use any artificial means to do so; it is unnecessary and may be injurious. Let me to this aphorism add another, to which I have already alluded, and which surgeons would do well to remember. Where there is reason to believe that the cavity of the drum is inflamed, carefully abstain from all poking with catheters, or any attempt to introduce foreign substances into that delicately-organised portion of the animal machine. As good general surgery teaches us to avoid the introduction of instruments through an inflamed urethra, or into an irritable bladder, so ought judicious aural surgery to teach us to abstain from meddling in the cases to which I have alluded. The only solid instrument with which I now ever venture to explore the Eustachian passage, and that only for a short distance, is an ivory bougie, rendered flexible by having the earthy matter removed by immersion in acid, and the point of which for an inch at least had been previously softened in water so as to resemble a piece of gelatine. A large size catheter should be first introduced, and the bougie passed up through it; but stricture of the Eustachian tube is so exceeding rare, and so difficult to recognize during life, that the surgeon is very seldom called on to practise such an operation."

Chapter III. is devoted to Statistics and Nosology of Ear Diseases. The author here takes the opportunity, in alluding to Kramer's statistical chart and tables on this subject, to express the most unqualified disbelief in the "nervous deafness," to which the Berlin aurist attributes more than half his cases. He

contrasts the results of his own observations, "faithfully taken as they presented at a public hospital, in the presence of, and equally observed by, a number of medical men and intelligent students," with the figures afforded by Dr. Kramer. And, while not denying the great prevalence of nervous deafness, he doubts decidedly the proportion which, according to the German aurist's belief, they bear to the entire mass of diseases of the organ of hearing.

The remainder of the book is of a practical character, and the subjects discussed are in the following order:—1. Diseases of the Auricle, Mastoid Region, and External Meatus. 2. Diseases of the Membrana Tympani. 3. Diseases of the Middle Ear and Eustachian Tube. 4. Diseases of the External Ear. 5. Otorrhœa. We may particularize here as points treated with especial interest, the management of strumous myringitis, (p. 263)—that of accidental perforation of the membrana tympani, (p. 287)—the discussion of the operation of extirpation of the tonsils, (which Mr. Wilde condemns,) (p. 351)—and of the subject of nervous deafness, (p. 361).

In the Appendix, the subject of Deaf-Dumbness is noticed at considerable length, and will well repay perusal. The author does full justice to the efforts of our country in this direction. We quote his remarks with great pleasure:

"We now turn to America, where the claims of the deaf and dumb have not only met with a hearty response from the public, but where the country at large has made ample provision for their maintenance and instruction. So early as 1793 there appeared in the Transactions of the American Philosophical Society, 'Cadmus, or, a Treatise on the Elements of Written Language, and with an Essay on the Mode of Teaching the Deaf or Surd, and, consequently, Dumb to speak.' As I have already mentioned, the number of instances in which national institutions have had their origin in the interest awakened in some philanthropic individual by a mute child, is remarkable. In 1807, the deaf and dumb daughter of Dr. Cogswell, of Hartford, U. S., attracted the attention and enlisted the sympathies of the late Rev. Thomas H. Gallaudet,—a man who united the true principles of charity with distinguished scholarship and unwearied assiduity and patience. He subsequently proceeded to Europe, in order to acquire the art of imparting instruction to the deaf and dumb; and having remained for some time a pupil under the Abbé Sicard, he returned to America, accompanied by M. Clerc, who was then (in connexion with Massieu, the favorite pupil of De l'Epée) one of the mute assistants of the Parisian institution.

The first institution for the instruction of deaf mutes in America was opened at Hartford in 1817. Since then, no less than twelve other large establishments for a similar purpose have been erected in that country; and the expenses in these are defrayed, like most of those on the Continent of Europe, by a state provision, either in grants of land or money.

The subject of muteism generally, as well as the system of instruction in America, has engaged the attention of the learned and benevolent, and the publications relating to muteism which issue from the press in that country are numerous and valuable. The reports which emanate from the American Institutions, particularly that at New York, are models of their kind. The Rev. W. Gallaudet published some sermons on muteism, a 'Child's Picture, Defining and Reading Book' (Hartford, 1830,) and also some reviews and literary articles relating to the deaf and dumb. Several interesting addresses on that subject have been also delivered on special occasions by Laurent Clerc, Dr. Mitchell, Mr. Lewis Weld, and Harvey Peet. These were subsequently published, and contain most valuable information. Mr. Peet has also written several school-books and elementary works for the deaf and dumb; and to the courtesy of that gentleman I am largely indebted for much information regarding the American institutions, and for an extensive collection of American works relating to muteism. The North American Review for 1834 has a philosophical and admirably written article upon the education of the deaf and dumb, and the Philadelphia edition of the Encyclopædia Americana likewise contains an article on the dumb and deaf. The Christian Spectator for 1837, the New York Literary and Theological Review for 1835, and the Biblical Repository for 1842, also contain articles on the existing state of the art of instructing the deaf and dumb. Tales and poems bearing upon the subject of muteism have likewise appeared from the pens of Mr. Nack, Mr. Burnett, and Mr. John Edwin Mann,—the latter a deaf mute, educated at the Hartford Asylum.

In October, 1847, appeared the first number of the American Annals of the Deaf and Dumb, originally conducted by the instructors of the American Asylum, and afterwards ably edited by Mr. Luzerne Rae,—a quarterly periodical which continues to the present time. This is by far the most valuable publication connected with the subject on which it treats at present in existence."

The additions of the American editor, (who modestly declines the usual editorial distinction of a place in the title-page,) are valuable and judicious. He has appended to the author's observations on Syringing, an account of a useful instrument invented by Dr. Hullihen, of Wheeling, Va., to enable patients, without aid, to syringe out the external meatus for themselves. On the subject of counter irritation, he recommends and describes the *Cantharidal Collodion*, as a desirable substitute for the ordinary

blistering ointment. Malformations of the ear are illustrated by the editor, with an interesting case of Professor Mussey's, of "congenital absence of the meatus auditorius externus of both ears, without much impairing the hearing." Other interesting cases, extracted from American journals, are appropriately introduced by Dr. Hewson; and we notice also a very good manipulative suggestion, from the same source, for the application of caustic solution to the mouth of the Eustachian tube.

The wood-cut illustrations of this work are exceedingly well done; and its general appearance is of the highest style of American publications. It is, emphatically, a good book.

A Treatise on Operative Ophthalmic Surgery. By H. Haynes Walton, F. R. C. S., Surgeon to the Central London Ophthalmic Hospital, &c., &c. *First American from the First London Edition. Illustrated by One Hundred and Sixty-nine Engravings on Wood.* Edited by Squire Littell, M. D., Author of a Manual of the Diseases of the Eye, Surgeon to Wills Hospital for the Eye and Limbs, &c. &c.—Philadelphia, Lindsay & Blakiston, 1853. 8vo. pp. 599, (including Index.)

The remarkably handsome style in which the American edition of this attractive book has been produced, does great credit to its enterprising publishers. Some acquaintance with the London original had disposed us to look with interest for the present reprint, and a closer examination of the latter has more than fulfilled our previous expectations. The notes and corrections of its distinguished editor, taken in connection with its near approach to the English copy in engraving and typography, have rendered it, what reprints always ought to be, decidedly more desirable than its foreign prototype. At all events, the manner in which Dr. Littell has been seconded by the publishers in the getting up of the volume, materially enhances the value of his share of the undertaking, and must rapidly secure the favorable reception which he anticipates in his preface, and considers so abundantly justified by the intrinsic merits of the treatise.

These merits are so clearly and faithfully set forth in a few

words of this preface, that we cannot do better for our readers, or the book itself, than to insert them here.

"It is evidently the production of a thoughtful and independent observer, thoroughly acquainted with his subject, and capable of imparting to others, clearly and plainly, the knowledge which he possesses. The information it contains is, for the most part, accurate and precise, and its preceptive teachings practical and judicious. The reader is not perplexed by the necessity of determining for himself the relative value of different modes of procedure; but is authoritatively instructed in that which experience has proved to be the most appropriate for the accomplishment of his purpose. The sound principles of pathology which it inculcates, derived from the best schools of English Ophthalmology, naturally lead to a rational and conservative treatment. It embodies the results of extensive literary research and close personal observation, under circumstances of rare opportunity; and though of unequal excellence —some parts being more carefully written and more fully developed than others, with occasional discussions also of topics not strictly included in its title—is alike creditable to the author, and a valuable contribution to ophthalmic surgery. It has been very favorably noticed by the leading medical journals of Great Britain, and is the subject of especial commendation by a distinguished authority. 'In the whole range of ophthalmological literature,' says Dr. Mackenzie, in a review which is not sparing of criticism, 'we know of no work that, on the whole, better deserves a place in the library of the surgeon. It is full of sound and practical views, and shows the rapid advances which are being made in this department of the medical art. Most of the cases have occurred to the author himself, and prove him to be an observing and able practitioner. His style is good, being perspicuous and unaffected; and any errors in the book are few and trivial in comparison of the mass of accurate information which it contains.'"

Mr. Walton does not confine himself to a logically strict discussion of the mere operations on the eye and its appendages. He naturally avails himself of the elastic meaning of his title, and treats his readers to something more agreeable and useful than a dull routine account of mere manipulations, which of themselves comprise but a subordinate part of the whole range of operative ophthalmic surgery. In fact, like most of the standard issues from the British press, our author's treatise appears to be much more practical and substantial, than it is formally precise and systematic. While he does not affect to exhaust his subject, either in details or outline, he has nevertheless supplied the working practitioner with an amount of available instruction, in regard to the surgical treatment of the eye, that will not easily be displaced by the elaborate teachings of much more

voluminous guides. We are not inclined, therefore, to complain because in treating of operations on the eye he has incidentally favored his readers with a great deal of interesting information on the pathology, diagnosis and therapeutic management of several injuries and diseases of the visual organs. We consider this liberal treatment of his subject one of the best points of his book, and one that cannot fail to prove in it a great source of popularity, as well as actual utility among the profession of this country.

The twenty-one chapters treat successively—1st. Of the use of chloroform in Ophthalmic Surgery; 2. Of Ophthalmic instruments in general; 3. Of injuries; 4. Of foreign bodies on or in the eye, larvæ under the lids, ossification of the occular tissues; 5. Affection of the eye lids, and of the lachyrmal passages; 6. Affections of the lachrymal outlets; 7. Caries of the orbit; 8. Nævi and vascular tumors; 9. Scarification in chemosis; 10. Strabismus; 11. Tumors; 12. Protrusion of eye-ball; 13. Staphyloma; 14. Conical cornea; 15. Removal of opacities; 16. Cataract; 17. Entozoa; 18. Artificial eyes; 19. Malignant affections; 20. Artificial pupil; 21. Extirpation.

The chapter on the use of chloroform, presents a new feature in the study of Ophthalmic Surgery. The account of it in this instance is clear, concise, and sufficiently full for practical purposes, although we confess that we should have been glad to find some kind of exposé of the positive or approximative therapeutic results from operations under chloroform and other anæsthetic agents. Anæsthesia is still regarded here as a complication not to be desired in most operations on the eye; and we want something more assuring than even Mr. Walton's great experience, to satisfy our doubts as to the ultimate advantages of such an almost indiscriminate resort to chloroform, as he would seem to advocate. "Except the operation for the extraction of cataract," he says, "or the division of the cornea, to a like or nearly equal extent, for any other purpose, there is no operation on the eye in which well-founded objections exist to the previous use of chloroform, or ether, as anæsthetic agents." The objection arises, in the cases mentioned as exceptional, from the risk of vomiting and consequent loss of the vitreous humor. This danger of vomiting affords, in our view, a serious objection to the

use of anæsthetics in many other operations not included in the above exceptions. At any rate, the question to be answered is *cui bono* in many of the comparatively slight and easily tolerated surgical procedures which have to be performed. We can readily appreciate its value in operating upon children or timid patients, or upon very sensitive or irritable adult eyes; but beyond this, we think, more definite rules of action are needed for our guidance in the resort to it, than Mr. Walton has thought proper to lay down.

Chapter 2d is occupied with the consideration of ophthalmic instruments in general, upon which it presents us with some excellent remarks. Lightness, small size, and good order as to points and edges, are dwelt upon as indispensable requisites in all these implements. Cataract needles, knives, and the like, should have wooden handles, small, round and smooth, in preference to the old fashioned and many sided ivory holders generally employed. The wood-cuts in this chapter are, like the illustrations throughout the book, appropriate and admirably done. Here and elsewhere, they facilitate most effectually the precepts and descriptions of the text, and constitute one of the strongest attractions of the volume.

The third chapter is one that might not be looked for in a dissertation on operations, since it is devoted to injuries from mechanical or chemical agents. It contains a good deal of instructive matter, and many useful hints; so that whether out of place or not, it must prove acceptable to the great majority of readers, and could not conveniently be spared. Chapter fourth, like its immediate predecessor, is not wholly occupied with operative surgery, and is none the less valuable and interesting, being principally engaged with the subject of foreign bodies in the cornea and within the ball. The number of cases detailed in these two chapters, renders them in the highest degree useful to practitioners of every grade, all of whom are liable to the emergencies which are here forcibly described and illustrated.

The next chapter, which is a capital one in all respects, treats at length of various affections of the eye-lids, such as abscess, symblepharon, anchyloblepharon, epicanthus, ptosis, trichiasis, entropium, entropium with trichiasis, ectropium, obstruction of the meibomian ducts and conjunctival calculi. This is followed by an

interesting chapter on affections of the puncta, canaliculi, and what he calls the lachrymal tube; by a chapter on caries of the orbit; by another, very carefully prepared, on nævi materni and venous and arterial aneurismal growths; by one on incision of the chemosed conjunctiva in purulent ophthalmia, and by another on strabismus. Then we have a well furnished chapter on tumors of the eye; another, also good, on protrusion with anæmia and enlarged thyroid, and on exophthalmia from other causes, on rheumatic inflammation of the occular sheath, periostitis, abscess and inflammation within the orbit, and disease of the optic nerve. Next follow three shorter chapters, devoted respectively to staphyloma and its attendant characteristics and remedial management, to conical cornea, and to the treatment by operation or otherwise, of opacities of the cornea. In discussing the various topics above hastily enumerated, Mr. Walton, without presenting much that was actually new, has managed to enrich his pages with many highly interesting cases, and a great deal of pertinent matter, which, accompanied and qualified as it occasionally is by the comments of his American editor, will afford the practical inquirer more material aid than could be gleaned in the same time, from any other work yet extant on the subject.

Our limits forbid the notice of many points, which in a more elaborate review would suggest themselves to our attention. We might dwell with advantage upon several questions of theory and practice, as well as upon some important observations—such, for example, as those concerning trichiasis and entropium, their causes and best mode of cure, the phenomena of exophthalmia, the effects of certain conditions of the lens in staphyloma, the treatment of nævi and vascular tumors, the history and management of other morbid growths, the ablation of opacities, &c., &c.—but we are obliged to hasten to a close, with an equally brief glance at the remaining six divisions of our author's task.

The first of these, (chap. xvi,) is a long and able one on cataract. The whole subject is here considered *in extenso*, and with a praiseworthy attention to matters of practical detail in the previous and subsequent care of the patients, as well as in the different stages and modes of operating. We are glad to find the needle recommended by Mr. Walton, and represented

in the marginal engraving, to be substantially the same as that preferred by the operators at the Wills Hospital in this city, and which has been employed with so much success (about 80 per cent cured according to Dr. Littell) upon the patients of that house.

Chapters xvii and xviii are occupied with entozoa and cysts within the eye and its appendages, and with artificial eyes. Chapters xix and xx, the one on malignant diseases of the eye, and the other on artificial pupils, are two long and admirable papers, which are decidedly the best of the book. Chapter xix especially, in its whole character, arrangement, matter and sound conservatism of doctrine and precept, commends itself to the attention and respect of every reader, and can not fail to secure an honorable position to the whole work, independently of all other claims. Chapter xx, on artificial pupil, is scarcely less worthy of approval for clearness and beauty of arrangement and illustration, and for the interest and variety of the cases cited in connection with the different questions belonging to this important subject. The conditions under which an operation may be undertaken, and those which contra-indicate it, the relative advantages of the several positions in the iris for a pupil, the size and shape of the pupil, the classification of the principal morbid states of the eye requiring a pupil, with the most appropriate operations—are all handled in the very best manner.

The only remaining chapter treats of extirpation of the eyeball, and of the entire contents of the orbit. We take our leave of our author and his editor, with a quotation which neither will regret to see again in print, and which we place before the readers of this journal, rather for the sake of the solemn lesson it conveys, than as a specimen of Mr. Walton's style:—

"All that we have hitherto ascertained as to the origin and nature of cancer, leads us to the conclusion that it is a constitutional, not a local disease, and that the tumor or sore is merely the evidence of the poison that is at work within; the outlet, so to speak, at which the *materies morbi* endeavors to escape from the system. If this be true, it is evident that any attempt to arrest the disease by the removal of its local manifestation can be attended only with disappointment; and that the illustration adduced by Mr. Simon, that we might as well attempt the cure of gout by the amputation of the offending toe, is, in many respects, strictly applicable. I do not mean to assert that cancer, when left to run its course, is inevitably fatal; or that an operation for its removal is

invariably followed by its recurrence; cases occur, from time to time, in which it disappears spontaneously from the system, by processes which it is not necessary here to describe; and several well-authenticated instances are on record, in which the extirpation of malignant growths, even under the most discouraging circumstances, have been followed by complete and permanent recovery. Such exceptional cases, however, are so rare, and the conditions under which they occur are so little understood, that it would not be safe to make them the basis of any practical conclusion." (p. 536.)

It is gratifying to meet with views of this high stamp, in regard to questionable operations, in a work which is destined, under its peculiar auspices, to exert a considerable influence on the ophthalmic practice of the country. We take the greater pleasure, therefore, in recommending it as a safe and convenient adviser which ought to have its place in every medical library,—not as a substitute for Hays' Lawrence, and Littell's manual, but as an admirable and most efficient companion to those indispensable monitors.

A Treatise on General Pathology. By Dr. T. HENLÉ, Professor of Anatomy and Physiology in Heidelberg. *Translated from the German.* By HENRY C. PRESTON, A. M., M. D. Philadelphia. Lindsay & Blakiston, 1853. pp. 391.

It is with sincere pleasure that we notice the appearance of a translation of Prof. Henlé's treatise on Pathology, for we have long felt the want of an easily accessible standard work on the subject. Prof. Henlé's reputation as an anatomist and pathologist has been long and well established—his General Anatomy, published 1841, being regarded as a classical work all over the world. The present treatise forms the first part of his extensive work on Rational Pathology, which, begun in 1846, has only recently been concluded. It is, as the author himself informs us, an attempt to collect into the same form, those physiological facts which the observations of diseased bodies have brought to light, together with the theories and hypotheses pertaining to them. This volume, or the part on General Pathology, treats of all those topics which are especially attractive to every reflecting medical man, and which for centuries have occupied the attention of the most distinguished medical minds.

Prof. H. commences his works with a description of the different medical systems. The method of cure derived from

clinical experience he calls the *Empirical* system; whilst the method which considers the symptoms in their dependence upon each other, he denotes as the Physiological or *Rational* system. He deems the Empirical system preferable, provided the medical experiences be pure and undeniable: the statistical method of Louis for classing experiences, he does not regard as applicable to rare or chronic diseases, nor to those whose course presents great fluctuation.

Rational Pathology he divides into four sections:

1. The inquiry into the idea and nature of disease.

2. The doctrine of the causes of diseases in general, or General Etiology.

3. The local relations of disease and the conditions of its propagation in the organism.

4. The relation of disease in regard to time, or the general history of disease, its course, duration and termination.

These divisions are followed by an admirable historical view of medical systems grouped into seven periods.

First period, from 500 to 100, B. C. The period of the Pythagorean philosophy of nature. *Second* period, from 100, B. C., to the beginning of the sixteenth century after Christ, commonly under the influence of the corpuscular philosophy, and ending with the regeneration of the empirical sciences. The *third* period, from the beginning of the sixteenth to the seventeenth century, is characterised by the development of the doctrines of Theophrastus Paracelsus. The *fourth*, which occupies the first half of the seventeenth century, originates from the advancement of Chemistry and Physics. The *fifth*, extending as far as the commencement of the eighteenth century is the period of reaction against the materialism of the foregoing period by the systems of Hoffmann and Stahl, until their final overthrow by the nervous physiology, which, in the sixth period, in the second half of the eighteenth century disappeared again in its turn. The *seventh* period, the one in which we now live, Prof. Henlé regards as originated by Schelling's Philosophy of Nature, which gave rise to the so-called natural, historical, and pathologico-anatomical schools.

After a consideration of the systems, the subject proper of General Pathology is taken up. The first, second, and third

chapters, are devoted to the definition of disease, the nature of disease, and to morbid processes. The next subjects considered, are the properties of Irrritation, Reaction, and Restitution. We should be glad, if our limited space permitted, to notice each chapter in succession. We can only, however, mention the most important points contained in some of them.

In the chapter on hereditary quality our author distinguishes between *generated* or *begotten* diseases, and *hereditary* or *inherited* diseases; the latter being not merely a propagation, but also a repetition of the disease of the parents. Diseases, he thinks, are inherited from both parents, but the preponderance of one side may destroy the influence of the other, and lessen and obliterate a morbid predisposition. The chapter on Sympathy and Antagonism is very interesting and important. The remarks on the structure of the nervous system are of inferior interest. We cannot refrain from noticing a very singular view expressed in the chapter on Sympathies of Cellular tissue, as to the production of cutis anserina, namely,—that it is a spasm of the skin; this must evidently have been written before the researches of Prof. Kolliker on that subject were published. Prof. Henlé admits a rhythm for all diseases, but denies anything like a crisis, which he considers a most tenacious relic of the mythical beginnings of the science of medicine. In the terminal chapter on the signs of death, he distinguishes actual death from apparent death, by the complete loss of tone and irritability, and therefore proposes irritation by electricity as the only means applicable in doubtful cases; cold he found accelerated the rigor mortis.

So much for the topics treated of in the work. The style is attractive; the language is good, but in some places rather fanciful and not very clear, as the following passage will show:

"The devil of medicine is disease, or in more scientific language, the morbid irritant, the *materia peccans*, the penetrating noxiousness, the morbid organism. Between the medical and the theological devil, according to biblical notices and old wives' fables, there exists not a mere analogy but a complete identity; the delirious ravings of the possessed are the language of the evil spirit who possesses."

The whole manner, however, in which the subjects are treated of, and some of the mysteries of a diseased organism explained,

bears evidence to its being the work of a highly talented and cultivated mind. If a love for theory may have carried the author sometimes a little beyond his subject, we must bear in mind that this fault is a national German peculiarity. The work is excellent, and will prove a great addition to our Medical Literature.

As regards the translation, we can say, after having carefully compared it with the original, that Dr. Preston has fulfilled his difficult task with zeal and care. We hope he will continue his labors, for this treatise on General Pathology forms but a part of Prof. Henlé's original work. D. C.

The Practice of Surgery. By JAMES MILLER, F. R. S. E., F. R. C. S. E., Surgeon in Ordinary to the Queen for Scotland; Surgeon in Ordinary to his Royal Highness, Prince Albert, for Scotland; Professor of Surgery in the University of Edinburgh; Consulting Surgeon to the Royal Infirmary; &c., &c., &c. *Third American, from the Second Edinburgh Edition. Edited, with additions*, by F. W. SARGENT, M. D., one of the Surgeons to Wills Hospital. *Illustrated by Three Hundred and Nineteen Engravings on Wood.* Philadelphia, Blanchard & Lea, 1853. pp. 720.

Notwithstanding the numerous treatises of a practical character which have lately been issued from the press, this edition of the Practice of Surgery of Prof. Miller, cannot fail to receive an extended circulation. It is the third American from the second Edinburgh edition, a fact which must be highly gratifying, not only to the publishers in this country, but to the author also, as an evidence of the appreciation of his labors on this side of the Atlantic.

Many subjects are treated of in this edition, which were not included in the last, and its numerous illustrations will, we have no doubt, render it a far more acceptable volume. Indeed, the student of surgery will find in the "Principles" and "Practice" of Surgery of Professor Miller, (to use the author's modest phraseology,) "a tolerably complete system of surgery."

The American editor, Dr. Sargent, has appended many valuable notes and introduced numerous additional illustrations, which

greatly enhance both the appearance and usefulness of the work.

We are glad to see, that the Bibliography, which was omitted in the former editions, is now restored; and we feel also called upon to speak in high terms of the mechanical execution of the book. It must maintain a prominent position as a standard text-book in our medical schools.

The Maternal Management of Children in Health and Disease. By THOMAS BULL, M. D., member of the Royal College of Physicians, author of "Hints to Mothers" for the Management of their health during Pregnancy and the lying-in room. *Second Edition.* Philadelphia, Lindsay & Blakiston, 1853.

A strong dislike to works on popular medicine may be said to have existed in the profession from the early period of Buchan's "New Family Physician," to the present time. A meddlesome and opinionated state of mind, which shows itself in words and deeds, is frequently created in those who use such works, and this is not only annoying and disheartening to the practitioner, but has often led to dangerous and even fatal consequences.

Such are the arguments of those who object to popular treatises on medicine. On the other hand, humanity, the eradication of old prejudices and superstitions, the inability of obtaining medical advice, and the protection of the ignorant public against the impositions of quackery, are brought forward by the writers as pleas in satisfaction or in extenuation of their offence. We shall sum up judicially by saying, after worthy old Sir Roger, "that a great deal may be said on both sides of the question."

Dr. Bull makes three divisions of his subject:—"The management of children in health, the management of children in disease, and the prevention of scrofula and consumption." For many reasons, we prefer the first and last sections.

The style is plain and unpretending, and the advice sound and sufficiently in detail. Where such books are needed, it may be safely recommended.

Dr. Hooper's Physician's Vade Mecum: or a Manual of the Principles and Practice of Physic. Considerably Enlarged and Improved. By WILLIAM AUGUSTUS GUY, M. D., &c. *With Additions.* By JAMES STEWART, A. M., M. D., &c. Philadelphia. E. Barrington & G. D. Haswell, 1853. pp. 541. (*With Index.*)

This is one of the oldest and most popular of the "Manuals." It was thoroughly remodelled some years since, under the able editorship of Dr. Guy, and may now be safely commended to the student as a very complete, clear, and accurate résumé of the "Principles and Practice of Physic."

A Manual of Obstetrics. By THOMAS F. COCK, M. D., Physician to the New York Lying-in Asylum, to Bellevue Hospital, etc. New York. Samuel S. & William Wood, 1853. pp. 250. (*With Index.*)

A hasty glance at this handbook has impressed us very favorably of its merit. The author "makes no pretensions to originality," in its behalf, but puts it forth as a compilation, the basis of which has been his notes of the lectures of Professor Gilman, of New York.

Hallucinations: or the Rational History of Apparitions and Visions, Dreams, Ecstacy, Magnetism and Somnambulism. By A. BRIERRE DE BOISMONT, Docteur en Médecine de la Faculté de Paris, Directeur d'un Etablissment d'Aliénés, etc. etc. *First American, from the Second Enlarged and Improved Paris Edition.* Philadelphia, Lindsay and Blakiston, 1853. pp. 553.

This book contains an immense mass of curious and interesting cases on the subjects indicated by the title, which must give it great value as a work of reference to the student of these topics.

The curious in such matters will find in it a most careful résumé of all the "authentic (?) facts" connected with the subject in question, classified and subdivided on scientific principles, and studied in relation to their "symptoms, causes, lesions, prognosis, diagnosis and treatment."

In the discussion of these topics, the author puts forth much

acute and occasionally deep speculation; but there is a vein of combined credulity and mysticism throughout the book, incompatible with claims to a place among philosophical dissertations on the subject of mental pathology. M. De Boismont distinctly avows his "sympathy with the grand creed of supernaturalism," and is, moreover, a believer in clairvoyance. He considers the fact established, "that persons and objects, in connection with the person magnetized, can be seen by him under their real forms;" and believes "the phenomena of clairvoyance, prevision, and second sight to depend on a sudden illumination of the cerebral organ, which calls into activity sensations that have hitherto lain dormant."

The translation (from an anonymous pen,) is spirited and agreeable. Occasional inaccuracies, (such as we *will*, constantly, for we *shall*; the *Port* for *Oporto*, p. 65; &c.,) are noticeable; and we feel bound also to hold the translator responsible for allowing such blunders in English history to stand uncorrected, as "the Marquis of Londonderry, *afterwards* Lord Castlereagh," and "the *Harrowby* ministry."

The Prescriber's Pharmacopœia: Containing all the medicines in the London Pharmacopœia. *Altered to correspond with the U. S. Dispensatory. Third American from the Fourth London Edition.* By THOMAS F. COCK, M. D. New York, S. S. & W. Wood. pp. 178, (with Index.)

This will be found a most useful little pocket companion to both the student and practitioner, containing in a very small space a great amount of varied information, on subjects of everyday importance.

On the Use of Chloroform in Midwifery. By GEORGE N. BURWELL, M. D., one of the Physicians of the Buffalo Hospital.

Fracture Tables. By FRANK H. HAMILTON, M. D., Professor of Surgery in the University of Buffalo.

For these highly valuable statistical pamphlets, we are indebted to two distinguished physicians of the accomplished profession of Buffalo; a city which is rapidly becoming elevated by

the energy and talent of her leading physicians, to the position of a medical centre.

Dr. Burwell gives the statistics of one hundred and eighty cases, in which he administered chloroform for the relief of labor-pains. He does not discuss the *propriety* of administering this agent; but, waiving argument on that point, he gives us, first, his statistical results upon the most important points of the cases in which he administered it; secondly, an account of its effects, as noticed by him, upon the symptoms and progress of labor; and, thirdly, his mode of exhibiting it, the doses in which it may be safely given, and the rules by which he is governed in its use.

Dr. Hamilton's *Fracture Tables* are an important addition to the statistics on this subject.

Transactions of the Tennessee State Medical Society, at their Twenty-fourth Annual Session, convened at Nashville, May 4, 1853.

This volume contains, with the proceedings of the Tennessee State Medical Society, an interesting address on the history of Medicine, by Dr. J. M. WATSON, President; a valuable report on the adulteration of medicines, by Dr. R. O. CURREY; reports of Committees, by Drs. W. P. JONES and G. B. HASKINS; and cases by Drs. RAMSON, PARK, KNIGHT, and BOWLIN. The Transactions are most creditable to the Profession of Tennessee.

The Physician's Visiting List, Diary, and Book of Engagements, for 1854. Philadelphia, Lindsay & Blakiston.

This most convenient little work has already been issued, for 1854, by the enterprising publishers. Several improvements have been made in it, and it has been simplified by the withdrawal of all extraneous matter, except a table of poisons and antidotes. No physician, who has ever had the advantage of so useful a pocket-companion, can, we are satisfied, afford to be without it.

The Microscopist; or A Complete Manual on the Use of the Microscope. With Illustrations. By JOSEPH H. WYTHES, M. D. Philadelphia, Lindsay & Blakiston, 1853. pp. 212 (with Index.)

The value of this useful little manual has been well shown in the rapid exhaustion of the first edition in little more than a year. Numerous important additions have been made to the present edition, which is highly creditable to both the author and publishers.

THE MEDICAL EXAMINER.

PHILADELPHIA, OCTOBER, 1853.

Since the issue of our last number, the yellow fever has continued to present a few cases, all of which have, we believe, been traceable to the same circumscribed area in the south-eastern part of the city, which we have already alluded to. The general health of the town has been remarkably good, the bills of mortality being less than for corresponding periods of last year; and the fever may be said to be dying out, as the cases are not only diminished in number, but are much less malignant in type, than during the first period of its appearance. The frost, which may now be daily expected, will no doubt extinguish entirely the smouldering embers of the disease. We shall give in our November number, a conclusion of the account of the visitation of the fever, which was published in the September number.

MEDICAL DEPARTMENT OF PENNSYLVANIA COLLEGE.

Professor HENRY S. PATTERSON, who has for many years so ably filled the chair of Materia Medica and Therapeutics in this Institution, has retired from the active performance of the duties of that department, in consequence of enfeebled health, and has been appointed Emeritus Professor.

The vacancy thus created, has been filled by the election of Dr. JOHN B. BIDDLE, of Philadelphia, one of the editors of the Medical Examiner,

formerly Professor of Materia Medica and Therapeutics in Franklin Medical College, and Lecturer on the same branches in the Philadelphia Medical Institute.

Dr. Biddle has earned an enviable reputation as an accomplished and able teacher, and it is confidently believed that the interests of the School, and especially of the department of Materia Medica, so happily and brilliantly illustrated by his predecessor, will lose nothing in being committed to his hands.

The numerous friends of Dr. Patterson, we are sure, will join us in our heartfelt wishes that the repose he now seeks from arduous duties, may result in his entire restoration to health and usefulness. S.

MEDICAL NEWS.

Proceedings of the College of Physicians, of Philadelphia, in reference to the Death of Dr. Chapman.

CHAMBER OF THE COLLEGE OF PHYSICIANS,
Stated Meeting, August 3, 1853.

The College of Physicians of Philadelphia, through its Committee, Drs. Bell, Ruschenberger, and West, appointed for the purpose, makes the following record of its sentiments on the occasion of the death of Dr. Nathaniel Chapman, Senior Fellow of the College:

The fulness of years and failing health of Dr. Chapman, and his consequent withdrawal from the active discharge of his professional and social duties, gave, like the twilight that precedes the gloom of night, unmistakable notice of his approaching departure. The melancholy event thus anticipated has occurred; and this College now mourns the loss of its venerated and oldest member—of him, in whom was blended the skilful physician with the kind friend, the instructive writer, and the lucid and emphatic teacher, with the paternal adviser.

The great and distinctive merits of Dr. Chapman, as Professor in that Institution with which his name was so honorably connected during nearly half a century, and in which his ascendency was so conspicuous, will doubtless be delineated in due season. They are fully appreciated by numbers in this College, who, in common with thousands from all parts of the United States, listened to his attractive prelections, and formed their medical opinions under his tuition and guidance.

Farther manifestations of his untiring zeal in fostering medical instruction were afforded by his lecture-labors, for a period of twenty

years, in the Philadelphia Medical Institute, a summer school, of which he was the founder, and, from first to last, President.

As editor and journalist, intent on disseminating medical knowledge, Dr. Chapman has strong claims on the esteem of the entire profession in the United States. The periodical created, and for several years conducted by him, still flourishes, the vehicle for a vast number of highly valuable facts, and for the advocacy of sound ethics.

Long will the name of Chapman be associated in the memory of the members of this College, and of the community in which he lived, with the amenities that give a charm and refinement to social intercourse, and with the radiant yet genial wit which illuminated and quickened into gladness all whom he approached.

How many can bear willing and grateful testimony to his generous heart and freely-given hand, ever responsive to the calls of friendship and of charity, to the timid request of the youthful student for a temporary loan, and the faltering plea of old age for permanent support.

In commemoration of so much worth, and as an incitement to the members of this College and of the profession at large to follow in the path of their distinguished associate,

Resolved, That a bust and portrait of Dr. Chapman be procured, and placed in the chamber of the College.

The sincere and respectful condolence of the College is at the same time offered to the widow and family of the deceased under their bereavement. Also, *Resolved*, That a copy of the preceding record be communicated to Mrs. Chapman, by the present Committee.

JOHN BELL,
W. S. W. RUSCHENBERGER,
FRANCIS WEST.

On motion, the foregoing report was approved, and the resolutions contained therein adopted, and the whole directed to be published in the *American Journal of Medical Sciences* and *Medical Examiner*.

From the minutes.

D. FRANCIS CONDIE,
Secretary of the College.

TRIBUTE TO THE MEMORY OF DRS. CHAPMAN AND HORNER.—The graduates of the Medical Department of U. P., residing at Mobile, Ala., adopted the following resolutions in reference to the recent deaths of Prof. Chapman and Horner:

WHEREAS, It hath pleased Divine Providence to remove from the sphere of their usefulness our much respected and honored instructors,

Drs. NATHANIEL CHAPMAN and WM. E. HORNER; and, whereas, in our opinion such services as they have rendered the cause of Medical Sciences and our "Alma Mater," deserve some especial and lasting tribute; and, whereas, it was our peculiar privilege to receive instruction from their lips, and to have held up before us their bright examples of zeal and devotion to their profession, and high and honorable conduct in their private life—feelings of respect and esteem for them, and pride for the Science which they have so honored, have prompted us to meet together to give form and expression to the sentiments that fill our hearts in view of the bereavement that their deaths have occasioned. Be it therefore

Resolved, That in the death of Professors NATHANIEL CHAPMAN and WM. E. HORNER, our time-honored Alma Mater has lost two of its most indefatigable teachers, the city of Philadelphia two of its most respected and esteemed citizens, and the Profession of Medicine two of the most zealous contributors to the facts upon which that science has erected an enduring foundation.

Resolved, That as former pupils of these distinguished Professors, we especially know how to appreciate the loss that our profession has sustained—and though we know that the rich treasures of knowledge that they have left us as a legacy to Medical Science will perpetuate their names as long as the truths of that science last—still we, the Alumni of the school, with whose glory their names are so inseparably entwined, would do something more to place their services and their virtues as a shining mark by which to direct the steps of future aspirants for the honors and the fame which reward the Zealous, the Industrious and the Faithful in our Noble Science.

Resolved, That in furtherance of the above resolution, we do hereby call upon the Alumni of the Medical Department of the University of Pennsylvania, throughout the world, to contribute the sum of ONE DOLLAR each, on or before the 25th of December next, to defray the expense of erecting a suitable monument to their memories, in the University yard in Philadelphia—that such contribution be sent to the Dean or any member of the present Faculty, to be used by them for that purpose so soon as, in their judgment, a sufficient sum shall have been received.

Resolved, That all medical journals and all papers which may approve of this object, be requested to give the action of this meeting publicity, and to further the objects of these resolutions as much as may be in their power.

MEDICAL DEPARTMENT OF IOWA UNIVERSITY.—Dr. McGugin has been transferred to the Chair of Pathology, and E. R. Ford, M. D., of Keokuk, has been appointed to the Chair of Obstetrics, thus vacated by Dr. McG. Edward A. Arnold, M. D., of Baltimore, has been appointed to the Chair of Anatomy, vacated by the transfer of Dr. J. C. Hughes to the Chair of Surgery.

ARMY MEDICAL BOARD.—An order from the War Department constitutes an Army Medical Board for the examination of Assistant Surgeons for promotion, and of candidates for appointment in the medical staff of the army. The Board will convene in the city of New York on the first day of December next, and will probably continue in session three or four weeks. Applications must be addressed to the Secretary of War; must state the age and residence of the applicant, and must be accompanied by respectable testimonials of his possessing the moral and physical qualifications requisite for filling creditably, and for performing ably, the arduous and active duties of an officer of the medical staff.

YALE MEDICAL COLLEGE.—Drs. Henry Bronson and Benjamin Silliman, Jr., have been appointed successors of Professors E. Ives and Benjamin Silliman, in the Medical Department of Yale College; the former in the Department of Materia Medica, and the latter in that of Chemistry.

PROSPECTUS OF THE GEORGIA JOURNAL OF THE MEDICAL SCIENCES.—Under the above title, a new Journal is projected, to be published monthly, at Savannah, Ga., under the editorship of GEORGE F. COOPER, M. D. It has our best wishes for its success.

The PENINSULAR JOURNAL of MEDICINE and the Collateral Sciences, is the title of a new and well conducted Monthly, published at Ann Arbor, Michigan, under the editorial control of E. Andrews, M. D.

Professors COBB and BAXLEY have resigned their respective chairs of Anatomy and Surgery, in the Ohio Medical College, Cincinnati, and are to be succeeded by Drs. G. W. Bayless and Asbury Evans, the former as Anatomist and the latter as Surgeon. Dr. Samuel G. Armor has also been appointed Professor of Physiology and Pathology in the same institution.

Dr. R. J. BRECKENRIDGE has been elected to the chair of Materia Medica, in the Kentucky school of Medicine at Louisville, vice Dr. E. D. Force, resigned.

Prof. A. LITTON.—This gentleman has been appointed Chemist to the Geological Survey of the State of Missouri. He still retains, however, the chair of Chemistry in the St. Louis Medical College, which he has filled with such distinguished ability for eight or ten years past.

BUFFALO MEDICAL JOURNAL.—Dr. S. B. Hunt has become associate

editor of this excellent journal, to the pages of which he has heretofore contributed.

Dr. AUSTIN FLINT.—This gentleman has resigned the chair of Theory and Practice in the Buffalo Medical College, and Dr. Thomas F. Rochester, of New York, has been appointed his successor. Dr. F. still retains his professorship at Louisville.

MEDICAL DEPARTMENT OF THE UNIVERSITY OF VERMONT.—This Institution has been organized by the appointment of the following Gentlemen: Dr. W. S. Thayer, of Northfield; Dr. W. Carpenter, of East Randolph; Dr. O. Smith, of Montpelier; Dr. E. S. Carr, of Castleton, Vermont; Dr. H. Nelson, of Plattsburgh, New York; and Dr. L. W. Bliss, of Bradford, Vermont.

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.—The proceedings of the scientific convention held at Cleveland on the 28th of July, furnish gratifying evidence of the increased interest felt in science, and of the conviction, among its cultivators, of the necessity of associated efforts. Men of science are evidently realizing, in a highly appropriate manner, the dignity and utility of enrolling themselves as members of this body, which already includes so many who have earned an honorable celebrity. Nearly two hundred new members were elected at the recent meeting.

A full review of the proceedings of the association would be out of place in a journal devoted to strictly medical subjects; we may simply notice that after electing B. Pierce, the Cambridge astronomical professor, to the office of president, and Dr. Baird, of the Smithsonian Institute, and Professor St. John, to the offices of perpetual and annual secretary, the association proceeded to divide itself into sections, and to appoint standing and special committees.

Section A embraces mathematics and physics; Section B is devoted to natural history, geology, chemistry, geography and ethnology. Two-thirds of the papers presented were on subjects connected with mathematics and natural philosophy. Dr. Waldo J. Burnett contributed a paper on blood-corpuscle-holding cells, and their relation to the spleen; and a second paper upon the formation and mode of development of the renal organs in vertebrata. Professor Horsford, of Cambridge, presented an essay on the fatal effects of chloroform.

The officers of these two sections are as follows:

Standing Committee of Section A.—Professor Lovering, Chairman;

Professor W. M. Chauvenet, Secretary; Professors E. Loomis, H. L. Eustis, J. Winlock.

Standing Committee of Section B.—Professor S. St. John, Chairman; Professor H. L. Smith, Secretary; Drs. J. L. Riddle, W. J. Burnett, Jos. Leidy.

We regret to observe that a resolution was passed prohibiting the sale of the "Transactions" of the association. It appears that the annual assessment of one dollar each from six hundred members suffices to defray the expenses of publication, and it has accordingly been determined that the edition of the Transactions shall be limited to a number of copies sufficient to supply the individual members, and foreign learned societies.

The next meeting of the association will be held in Washington on the last Wednesday in May 1854.—*Virginia Med. and Surg. Jour.*

OBITUARY.—The profession in Richmond deplores the loss of Dr. William J. Clarke, who expired on the 20th of August, in the twenty-ninth year of his age.

Dr. Clarke possessed excellent capacities, and very considerable attainments in medicine. He was the eldest son of the late Micajah Clarke, who enjoyed for many years a wide and well earned reputation as a practitioner of truly wonderful sagacity. In consequence of the immense success of the father, the career of the son has been observed with more than ordinary interest, and his untimely end has elicited the warmest regrets.

Doubtless, had time been given him, had he reached the maturity of his powers, he would have gained enviable distinction, and have worthily succeeded to the great place in public estimation which his father occupied. Such at least were the hopes which his talents and mental cultivation permitted his friends to entertain, notwithstanding the excessive modesty and reserve which impeded his professional advancement. Therefore their grief is the more poignant, that in his early manhood, his work all unfinished, Death has come and cut him down.—*Virginia Med. and Surg. Jour.*

OBITUARY.—Dr. JOHN M. F. TRUDEAU, long a resident and respectable practitioner of St. Louis, died suddenly on the 22nd of August, of disease of the heart.

Obituary.—The following physicians fell victims to the late epidemic at New Orleans:—

Dr. A. R. Nye, aged about 26 years, a native of New York.

Dr. Jacobson, aged 40 years, late of St. Louis, Missouri.

Dr. A. C. Robertson, aged 23 years, a native of Nashville, Tenn.

Dr. Friend, aged — years, a native of Petersburg, Va.

Quinine in Yellow Fever.—Our experience during the present epidemic, with the Sulphate of Quinine, has convinced us that large doses of this salt cannot be relied on in the early stages of the attack.

In the commencement of the epidemic, the advocates of large doses of quinine soon found that this article, when given in sedative doses, failed to accomplish a cure, although the febrile symptoms gradually gave way to its use.

As the epidemic progressed, and its type and characteristic symptoms became better known, few, as far as we can learn, ventured to give large and repeated doses of this salt, except in particular instances. In our previous epidemic of Yellow Fever, the quinine practice succeeded best; but it is generally conceded, as far as we could ascertain, that this season it failed in a majority of cases to sustain its previous high reputation, as a powerful curative agent—hereafter, we shall have more to say on this subject.—*N. O. Med. and Surg. Journ.*, Sept. 1853.

The Epidemic of Yellow Fever at New Orleans.—About the 26th of May last, the first case of yellow fever entered the Charity Hospital, and after death, black vomit was found in the stomach. The first fever cases originated among the shipping along the Levee, in the Fourth District, from which point it extended rapidly through the adjacent portion of the town. A large population of unacclimated persons, living in wooden huts, with floors and timbers soaked in water, and half decayed, were seized with the disease in the most malignant form. For some time previously rain had fallen almost daily, and this added to a hot, burning sun, seemed to give strength to the poison, and lent intensity to the disease. The streets in this vicinity, for the most part, were unpaved, or planked, and the culverts, gutters, etc., were filled with water, saturated with filth and decaying vegetable and animal matter. The crowded state of these huts and low wooden tenements, with their floors steeped in mud and water, is admirably calculated to generate and propagate the germ of a disease which had already been sown in their midst.

The habits of these people, (being chiefly Irish and German laborers,) notoriously negligent and filthy, and utterly indifferent to all those precautionary measures which a limited knowledge of the laws of hygiene should suggest, served only to add fuel to the conflagration which was destined to extend its ravages to every portion of our devoted city. Hence, for some time, the yellow fever confined its work of death within particular localities,—but by and by gaining strength by what it fed upon, it began to travel to other and more distant points,—to extend its arms, so to speak, in every direction, until it grasped the Four Districts within its deadly embrace. For some time the hope was entertained that those who paid proper regard to personal comfort and cleanliness—who dwelt in high, airy, and well-ventilated apartments might escape the disease; but this proved a delusion,—it soon became apparent that, as heretofore, the epidemic fever was no respecter of persons,—the master was stricken down with the servant—the mistress with the maid—the proud and wealthy were brought to a level with the humble and needy. All who had not passed through some one of our epidemic seasons were exposed to attacks from the disease. As has been already mentioned, the fever made its appearance in the latter part of May, at least one month and a half earlier than usual, and from the first case up to the present, it steadily increased almost daily, until the mortality per diem exceeded that produced by any epidemic known in the annals of our sanitary history. In recording the fearful ravages of the present epidemic we must not forget that we have remained exempt from any such visitation since 1847, and during this time an immense population of unacclimated persons, both from Europe and the north-western part of our own country, have been accumulating in our city. The number of unacclimated persons in the city, at the breaking out of the epidemic has been estimated at 30,000 souls; but many of these, it is fair to suppose, have left the city to escape the disease.

The type of the epidemic differs but little from that to which we have been subject in former years; and the belief that persons had died of the disease in six and eight hours from the moment of seizure, can readily be explained by a better knowledge of the antecedent history of the case; for on inquiry it would generally be found that such individuals have had slight fever and other symptoms of the epidemic for two or three days previously to taking their bed and calling in medical aid. This surmise gains additional strength from the fact that the attack, in many instances, has been so insidious and destitute of alarming symp-

toms, that it is with difficulty such persons could be persuaded—could be prevailed upon to submit to the usual restrictive treatment.

It is not strange, therefore, that such cases, which had been neglected for two or three days, in the early and curable stage of attack, should terminate in fatal black vomit, in a few hours after the physician is summoned to the bedside of his patient. So much for the apparent malignancy of the present epidemic. In making the foregoing explanation, we aim not to deny the existence of an occasional case of extreme severity; so severe indeed as to terminate in death in a few hours, in spite of the best efforts of the most skilful physicians and the most careful nursing.

In some instances the system seems so thoroughly saturated with the poison of the disease, from the very moment of seizure, that no system of medication, as yet suggested, seems able to cope with and stay the fatal tendency of the fever. Every medical man who has had much experience in the disease, must remember occasional instances of this kind.

The disease this season, though essentially the same in many of its most prominent features, exacts, perhaps, on the part of physician and nurse, more care, diligence and precaution, to terminate favorably, than usual in our epidemics. The slightest imprudence, either in diet, exposure, or excitement of any kind, is almost certain to superinduce a relapse—from which state it is usually very difficult to extricate the patient. Hence, the great mortality among those who are not only ignorant of the peculiarities of the disease; but who are also unable, and in some instances unwilling to pay for the requisite medical aid and attendance.

We refer to our table below, furnished by Dr. Simonds, the active Secretary of the Board of Health, for a full account of the deaths and other particulars which have occurred since the epidemic broke out. By this, it will be seen that yellow fever has done terrible execution among our unacclimated population; has produced a mortality unparalleled in the history of our ill-fated city. Even while penning these lines, the fever is sweeping off over *two hundred per diem*—and from present appearances, it is likely to continue its fearful ravages for, perhaps, weeks to come.

Our quondam associate, Dr. Fenner will, in due time, give us a full and detailed history of this epidemic, as he did that of 1847, when the disease shall have run its course and done its work of death.

Below, we give the mortality produced by the epidemic, in the city of New Orleans, from the 28th May up to the 26th August, inclusive, for 1853:

The Epidemic.

Total number of death by yellow fever and other diseases, from May 28 till date:

Week ending.	*Total.*	*Yellow Fever.*	*Other Dis.*	*Not stated.*
May 28	140—110	1—1	139—139	
June 4	157—	1	156	
" 11	154	4	150	
" 18	147	7	140	
" 25	167—625	9—21	158—604	
July 2	177	25	152	
" 9	188	59	139	
" 16	144	204	140	
" 23	617	435	182	
" 31	884—2210	704—1427	138—741	42
August 1	142	106	25	11
" 2	135	115	14	6
" 3	146	124	17	9
" 4	166	135	15	10
" 5	150	128	9	13
" 6	238	194	30	14
" 7	209—1186	165—967	40—150	4—69
" 8	219	187	23	9
" 9	201	166	21	14
" 10	230	193	33	4
" 11	233	192	13	18
" 12	207	180	25	2
" 13	214	179	22	13
" 14	232—1526	191—1288	26—163	16—75
" 15	217	187	24	6
" 16	193	163	19	11
" 17	219	191	21	7
" 18	219	188	22	9
" 19	234	203	15	16
" 20	224	184	29	11
" 21	269—1575	230—1346	24—154	15—75
" 22	283	239	29	15
" 23	258	220	24	14
" 23	222	188	23	11
" 25	218	186	19	13
" 26	193—1070	151—884	29—124	13—66
Total	8336	5934	2075	327

N. B.—The returns from the St. Patrick's Cemetery since the 31st

July, not having been duly made, cannot be relied on, except for two weeks, when the books were resorted to by the Secretary, to enable him to make a weekly report.—*N. O. Med. and Surg. Journ., Sept.*, 1853.

RECORD OF MEDICAL SCIENCE.

PATHOLOGY AND PRACTICE OF MEDICINE.

Oil of Turpentine in the Treatment of Yellow Fever.—Mr. James Laird, Surgeon R. N., who was for nearly eleven years in constant service on the North American and West Indian Station, and for several years attached to the Royal Naval Hospital, at Bermuda, bears strong testimony, (in the London Lancet, 27th August, 1853,) to the success of the turpentine treatment in the yellow fever, as it prevailed at Bermuda. Attention was first directed to this remedy, with a view to restrain passive hæmorrhage, when its salutary influence was so strikingly observed, that "it was afterwards given in every case and in every stage of the disease," and with a marked improvement in the mortality. The dose was twenty minims in camphorated water, three times a day; "and in the generality of cases nothing else was given." The following statistics tell favorably for the success of this treatment:

"*Statistics of Mortality.*

1. Showing the comparative success of different modes of treatment in 164 cases of fever, as they are entered in the books of the Royal Naval Hospital, Bermuda, from the commencement of the epidemic; and the same number of cases, taken in the same order from the 27th of August, 1843, when the spirit of turpentine was first administered:—

Treatment without Turpentine.			*Treatment with Turpentine.*		
No. of cases.	Died.	Rates of mortality.	No. of cases.	Died.	Rates of mortality.
164	25	1 in 6·6	164	19	1 in 8·6
Recoveries from black vomit 1.			Recoveries from black vomit 4.		

2. Showing the number of cases treated with turpentine at the Royal Naval Hospital, Bermuda, between the 27th of August and the cessation of the epidemic in December, 1843:—

Total number of cases.	Died.	Rates of mortality.
882	80	1 in 11.
Recoveries from black vomit . .		24.

3. Showing the number of cases of yellow fever admitted into the

Royal Naval Hospital, Bermuda, during the epidemics which prevailed there in 1818, 1819, and 1837 :—

	No. of cases.	Died.	Rates of mortality.
1818 ..	105 ..	28 ..	1 in 3·8.
1819 ..	106 ..	25 ..	1 in 4·2.
1837 ..	140 ..	22 ..	1 in 6·4."

[The oil of turpentine is an old and highly esteemed remedy in Philadelphia practice in the treatment of yellow fever. Dr. Rush, in his history of the yellow fever which prevailed in this city in 1805, says that Dr. Physick used it that year with success for the vomiting that occurs in the second stage. Drs. Chapman and Hewson employed it at the Bush-hill hospital, in the epidemic of 1820, with great success, having cured twelve out of sixteen patients with drachm doses of the oil every hour. Prof. Samuel Jackson, in his account of the epidemic of 1820, (Philadelphia Journal of the Medical and Physical Sciences, vol. II,) speaks favorably of the effects of the oil of turpentine, although not disposed to assign it a particular pre-eminence over other remedies. He says, that "in the Hospital there were thirteen cases of the fever, in which the exhibition of turpentine was early commenced, and in which a fair trial of the practice was given. Of those cases, eight recovered and five died. (Op. citat. pp. 14, 15)." Our readers will find some interesting remarks on the use of oil of turpentine in yellow, remittent, and typhus fevers, and in diseases of a hæmorrhagic character, by Dr. S. Jackson, (late of Northumberland,) in the April number of this Journal for 1850.—Eds. Ex.]

Absence of Bronzed Liver in Remittent Fever.—Dr. McGowen, of Memphis, Tenn., publishes in the Memphis Medical Recorder, for September, the "*post mortem* examination of a *case* that had died of the comatose form of the Remittent Fever," in which the *bronze color of the liver*, described by Dr. Stewardson and others, as characteristic of the disease, was not perceived. Prof. Wooten, of Memphis, adds to this case some remarks, in which he says: "Since Dr. Stewardson published his cases, we have examined about a half dozen, and in not a single one have we witnessed the *bronzed liver* as described by that gentleman."

Asparagus Officinalis as a Remedy for Hydrophobia.—Dr. Chairétes, of Athens, reports in the London Lancet, 27th August, 1853, some cases which he deems illustrative of the curative powers of Asparagus in hydrophobia.

MATERIA MEDICA AND THERAPEUTICS.

Infusum Juniperi Compositum—Mr. Procter says: Having had occasion to prepare a variety of diuretics, for a member of my family affected with valvular disease, attended by dropsical effusion into the pleura and pericardium, none of them proved so successful as the infusion of Juniper berries with cream of tartar. The necessity of making the infusion every day, led to the adoption of the following formula, which was afterwards used with much satisfaction.

Take of Juniper berries, thoroughly bruised, four ounces.

Holland gin,	- -	four fluid ounces.
Boiling water,	- -	twelve fluid ounces.

Pour the boiling water over the bruised juniper, add the gin, mix them and let them macerate for twelve hours. The whole should then be thrown on a cotton cloth and expressed, and sufficient water added to the dregs and pressed out to make the infusion measure a pint.

The preparation thus made has an opaque brown color, and a decided odor and taste of the berries. When desirable, it may be made more active by rubbing one drachm of the oil of juniper with the bruised berries, then pouring the gin upon them, and after macerating an hour, adding the boiling water, and continuing the maceration for eight or ten hours longer. The liquid is then separated by expression as above. When made by the last method, the infusion contains more of the oleoresin of juniper in suspension, and is much less agreeable to the taste, but is more active and efficient. When the patient is troubled with gastric irritability, the first infusion is more appropiate. Whichever may be employed, the dose is from a tablespoonful to a wine glassful, mixed with a teaspoonful or more of cream of tartar, three times a day regularly. It is much better in prescribing juniper berries and cream of tartar for a patient, to direct the salt to be kept separate from the berries, and administered by measured doses with the infusion after it is made; because, when they are infused together, a large portion of the bitartrate crystallizes among the juniper dregs as the infusion cools, and is lost by straining the infusion.—*Journal of Pharmacy.*

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NOTICE TO CORRESPONDENTS.

Communications and Books for notice should be addressed to the Editors, care of Messrs. Lindsay & Blakiston.

Letters, &c., connected with the *business affairs* of the Journal should be addressed to the Publishers.

Papers for publication must be received *before* the 20th of the month, or they cannot appear in the forthcoming number.

The following Journals have been received in exchange:

American Journal of the Medical Sciences, Oct. 1853.
Medical News, ditto.
New York Medical Gazette, ditto.
New York Medical Times, ditto.
New York Journal of Medicine, ditto.
New York Journal of Pharmacy, ditto.
Nelson's American Lancet, ditto.
Stethoscope, (Richmond, Va.,) September and October.
Virginia Medical and Surgical Journal, October, 1853. (Not received. Please send it.)
New Jersey Medical Reporter, ditto.
Buffalo Medical Journal, ditto.
Western Lancet, ditto.
Louisville Medical Journal, ditto.
Kentucky Medical Recorder, ditto.
Chester and Delaware Co. Medical Reporter.
London Journal of Psychological Medicine, October, 1853.
British and Foreign Medico-Chirurgical Review, ditto.
Glasgow Medical Journal, ditto.
Dublin Quarterly Journal, August, 1853.
Dublin Medical Press, to Oct. 9th, inclusive.
London Medical Times and Gazette, ditto.

BOOKS RECEIVED.

Condie on Diseases of Children. From Messrs. Blanchard & Lea.
Proceedings of the American Pharmaceutical Association.

The foreign correspondents of the Examiner will please direct their Exchanges and other communications to the care of Tribner & Co., No. 12 Paternoster Row, London, or Mr. H. Bossange, 21 Bis, Quai Voltaire, Paris.

THE

MEDICAL EXAMINER,

AND

RECORD OF MEDICAL SCIENCE.

NEW SERIES.—NO. CVII.—NOVEMBER, 1853.

ORIGINAL COMMUNICATIONS.

Mortality of Philadelphia, for July, August and September, 1853, collated from the record kept at the Health Office. By WILSON JEWELL, M. D.

The total of deaths for the quarter ending October 1st, 1853, a period of 91 days or 13 weeks, amounts to 2955, equal to 32½ deaths per diem. An increase over the same quarter in 1852 of 204 in the aggregate, or about 7 per cent.

If we deduct the Still Born 137, the deaths from External Causes 124, Old Age 30, Debility 116, and Unknown 60, it gives us a record of 2488 deaths from reported diseases. Nevertheless, it will be borne in mind, that this is a mere approximation to the truth, owing in a great measure to the too frequent disregard by many practitioners, of the proper investigation of disease, and the cause of death and to the *ad libitum* manner of certification.

The excess of deaths in the sexes has been, as usual, on the side of males; equal to ten per cent.

Thirteen hundred and seventy-two, or nearly one-half the whole number of deaths, exclusive of Still Born, were under five years of age.

The record during the present quarter shows a considerable increase of mortality over that of the two previous quarters, amounting to 16 per cent, above the first, and 25 per cent, above the second quarter.

This augmentation, notwithstanding the absence from the city of many of our citizens, is the result generally of infantile mortality, during the *summer solstice.* But the present quarter's increase has been somewhat enhanced from the more than usual prevalence of Fever, in a certain locality of the city.

Class 1st.—Embracing the "Zymotic or Epidemic" diseases, furnishes 999 of the deaths for the quarter. Of this number, Cholera Infantum supplies 308, Dysentery 248, and Fevers of every division 266. Among the Fevers, 134 are set down under the head of those usually ascribed to malarious causes. This is a marked excess above those for the same period in 1852, when only 26 deaths were recorded from a similar cause. Last year there was an entire exemption from any Zymotic influence. The present quarter's unfair comparison in this respect, with the figures of other years, must be attributed in no small degree to the existence of an unusual poison in the atmosphere.

This poison has been productive of a highly malignant type of Fever, which not only assumed the livery of, but was in fact Yellow Fever itself. Of these, only 24 are recorded as Yellow Fever, while the remainder are put down under various other heads, as Typhus Icterodes, Malignant, &c.

It is proper to observe, that while the cases of Fever have increased in an undue proportion, over those for the same quarter in 1852, the comparative aggregate of deaths in the first class for the present quarter has only exceeded those of 1852, nineteen!

Class 2d.—"Sporadic." Of these, there were 400 deaths. Nearly one half occurred within the first year of life. Among them, 91 were from Marasmus, 48 from Debility and 22 from Inanition.

Class 3d.—"Nervous System." In this division, convulsions, that formidable cause of mortality in children, are credited with 165, out of the 509 deaths enumerated. The comparative increase of deaths from "sun stroke," (numbering 33, which,

added to those for the second quarter, 24, making in all 57,) above those for the year 1852, which only numbered 5, is an evidence of the high thermometrical atmosphere under which we lived during the summer.

Class 4th.—"Organs of Respiration." Under this general distinction, we find the deaths from consumption of the lungs amounting to 282, an increase over those of the same period for 1852, of 30, or nearly eleven per cent.

Table No. 3 exhibits the number of death at fifteen separate periods of life. Here we find that infancy supplies a very liberal proportion, not less than 1,372 occurring before the fifth year. Between the ages of twenty and fifty there were 833 deaths, showing that these distinct periods of infancy and manhood are fruitful in the production of death.

The deaths from the Alms House numbered 221. Those among the blacks 175, while there were 35 brought from the country to swell our city mortality.

TABLE No. I.

Deaths for the Third Quarter of 1853, *classified.*

	July.	August.	September.	MALE. J.	MALE. A.	MALE. S.	FEMALE. J.	FEMALE. A.	FEMALE. S.	Total.
1. *Endemic and Contagious Diseases.* Zymotic or Epidemic	314	446	239	169	249	118	145	197	121	999
2. *Uncertain or general seat.* Sporadic diseases	134	149	117	75	72	61	59	77	56	400
3. Nervous System	153	231	125	84	146	72	69	85	53	509
4. Organs of Respiration	115	157	145	55	67	65	60	90	80	417
5. " Circulation	12	19	13	3	8	7	9	11	6	44
6. Digestive Organs	64	79	38	30	42	22	34	37	16	181
7. Urinary Organs	4	4	1	1	4		3		1	9
8. Organs of Generation	9	10	13				9	10	13	32
9. " Locomotion	1	3	1	1	3				1	5
10. Integumentary System	3	1	4	2	1	3	1		1	8
11. Old Age	11	9	10	6	2		5	7	10	30
12. External Causes	37	56	31	26	42	19	12	14	11	124
Still Born	44	47	46	21	23	22	23	24	24	137
Unknown	19	24	17	9	15	13	10	9	4	60
	920	1235	800	482	674	402	439	561	397	2955

TABLE No. II.

1. *Endemic and Contagious Diseases—Zymotic or Epidemic.*

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Cholera Asphyxia	2								1	1								2
" Infantum	162	146	216	85	7													308
" Morbus	10	4	3			1				4	4			2				14
Croup	19	12	4	5	18	4												31
Diarrhœa	38	33	26	14	8	2	1	1	1	3	4	4	5		2			71
Dysentery	142	106	37	49	22	17	9	8	24	16	28	18	16	4				248
Erysipelas	3	5			1				3	4								8
Fever	3	4	2					1	2		2							7
" Bilious	17	10			1			1	8	5	2	2	5	3				27
" Congestive	1	3						1	1	1		1						4
" Continued		1			1													1
" Intermittent	3	2			1	1					1	1		1				5
" Malignant	8	7					1		4	2	6	2						15
" " Bilious	12	17						3	13	5	6	1	1					29
" " Remittent	1	1						1	1									2
" Nervous		1						1										1
" Pernicious		1							1									1
" Remittent	10	5		1	1	3	2	2	2	3		1						15
" Scarlet	15	19	5	5	13	9		2										34
" Typhus	16	14			1	1	1	6	5	7	4	4	1					30
" Typhoid	31	29			1	1	4	10	17	9	10	3	3	2				60
" Typhus Icterodes	9	2						2	9									11
" Yellow	11	13			1			2	12	6	3							24
Hooping Cough	14	25	20	11	6	2												39
Measles	1			1														1
Small Pox	5	2	4		1	2												7
Syphilis	2				1				1									2
" Congenital	1	1	2															2
	536	463	319	171	84	43	18	41	105	66	70	37	31	12	2			999

2. *Uncertain or General Seat.—Sporadic Diseases.*

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Abscess	6	3	1		2	1			1	1	2	1						9
" Psoas	1											1						1
Cachexia		2	1											1				2
Cancer	1	2								1			1	1				3
" Breast		4									1	3						4
" Lip	1								1									1
Cyanosis	2	5	6	1														7
Debility	45	71	48	4	3		1	1	5	8	4	8	18	10	4	2		116
Disease of Glands	1											1						1
Dropsy	16	18	1		2	3	1		3	8	3	2	6	2	2	1		34
Disease of Abdomen	1									1								1
Hemorrhage	3	1	1	1			1					1						4
Inanition	18	9	22	1					1		1			2				27
nflammation		2		1	1													2
" Glands (malignant)	1					1												1
Marasmus	85	60	91	40	10	1	1							1	1			145
Malformation	2	1	3															3
Melanosis	1										1							1
Melœna		1	1															1
Mortification		1							1									1
Tabes Mesenterica	9	5	4	5	5													14
Scrofula	11	5	1	1	4	2	1		3	1	1	1	1					16
Tumor, Abdominal		2												1	1			2
Ulceration, Throat	4		2		2													4
	208	192	182	54	29	8	5	1	15	20	13	18	26	18	8	3		400

3. *Of the Nervous System.*

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Abscess of Brain	1	1			1						1							2
Apoplexy	20	12							2	9	5	3	7	5		1		32
Concussion of Brain	1	1							1	1								2
Congestion "	49	21	15	9	9	2	1	4	5	13	1	7	3	1				70
Compression "	2	2		1						1	1		1					4
Convulsions	81	75	88	39	18	4	2		2	2		1						156
Coup de Soleil	25	8			1				10	12	6	2	1	1				33
Dementia		2							1				1					2
Disease of Brain	12	13	7	9	2	2	1		1	1	1				1			25
Dropsy of Brain	31	24	23	14	13	2	1		1	1								55
Effusion "	13	11	8	2	6	2			2	2		1	1					24
Epilepsy	3	2	1			2		1			1							5
Inflammation of Brain	24	17	13	8	4	5	2	2	2	1	3		1					41
Mania	1												1					1
" a potu	17	8							5	6	9	5						25
" Puerperal		1							1									1
Neuralgia	1	1	1						1									2
Neurosis	1								1									1
Palsy	13	7			1				1	2	2	5	1	2	5	1		20
Softening of Brain	1												1					1
Tetanus	4							1	2	1								4
Trismus		1											1					1
Tumors of Brain	2												1	1				2
	302	207	156	82	55	19	7	8	38	52	30	24	20	10	6	2		509

4. *Organs of Respiration.*

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Asthma	1	2										1	1	1				3
Congestion of Lungs	6	5	1	1	1			1	2	1		4						11
Consumption "	127	155	6	11	5	1	3	30	89	58	40	21	11	7				282
Disease of Chest	1	1	1					1										2
" Lungs	2	6	2	1				1	2	1	1							8
Dropsy of Chest	7	5			3					2		6		1				12
Effusion "	1	1									1				1			2
Hemorrhage of Lungs	4	3							1	3	1	1	1					7
Inflammation Bronchiæ	13	17	10	9	2				1		2		2	3	1			30
" Chest	2	1	2					1										3
" Larynx		3		1	1	1												3
" Lungs	20	27	14	4	7	4			7	6	3	1	1					47
" Pleura	1							1										1
Hectic Fever		1	1															1
Tuberculosis		3			1				2									3
Ulceration of Larynx	1				1													1
" Trachea	1				1													1
	187	230	37	27	22	6	3	35	104	71	48	34	16	12	2			471

5. *Organs of Circulation.*

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Aneurism of Aorta	2									1	1							2
Disease of Heart	12	16	4						6	7	2	2	4	2	1			28
Enlargem't "	2	5	1				2				2	1	1					7
Inflammation "		2							1	1								2
Malformation "	1	2	3															3
Ossification "	1									1								1
Syncope		1							1									1
	18	26	8				2		8	10	5	3	5	2	1			44

6. *Digestive Organs.*

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Aphthæ		2	2															2
Cancer of Mesent'c Glands	1										1							1
Cancer of Stomach		1										1						1
Cancrum Oris		3	1	1	1													3
Cirrhosis Liver	2	1	1								1		1					3
Congestion "	1	1	2															2
Consumption of Bowels	4	2		1					1		2	1	1					6
Colic		2	2															2
Disease of Bowels		1	1															1
" Liver	1	2								1	1	1						3
" Stomach	1	3							2	1				1				4
Dropsy of Abdomen	2	3							2			2		1				5
Enlargement of Liver	3		1								1	1						3
Gangrene of Stomach		1				1												1
Hemorrhage of Bowels	1										1							1
" Stomach	2	2							1		1	1		1				4
Ileus		1		1														1
Induration of Liver		1							1									1
Inflammation of Liver	6	9		2	2				2	1	2	5	1					15
" Stom'h & Bow'ls	46	36	29	13	8	3	2		7	4	5	4	1	3	3			82
" Peritoneum	7	6	2		1		1		3	2	2		1			1		13
Jaundice	4	3		1	1					3	2							7
Obstruction of Bowels	3	1	2							1	1							4
Perforation of Intestines	1								1									1
Scirrhus Stomach	1											1						1
Sore Mouth	1		1															1
Teething	3	3	2	3	1													6
Ulceration of Bowels	2	1				1	1			1								3
" Stomach	1									1								1
" Stom'h & Bow'ls	1	2			1							1	1					3
	94	87	46	22	16	4	4		20	15	20	18	6	6	3	1		118

7. *The Urinary Organs.*

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Diabetes		1										1						1
Disease of Bladder	1									1								1
" of Kidneys	2										1		1					2
Inflam. of Kidneys		2	1					1										2
" of Bladder	1	1							1					1				2
Retention of Urine	1		1															1
	5	4	2					1	2		1	1	1	1				9

8. *Organs of Generation.*

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Amenorrhœa		1						1										1
Cancer of Uterus		3									2		1					3
Child Bed		4							2	2								4
Chlorosis		1							1									1
Disease of Uterus		1							1									1
Hemorrhage "		4							2	2								4
Inflammation "		1								1								1
Inverted "		1								1								1
Phlegmasia Dolens		1									1							1
Puerperal Convulsions		4						1	2	1								4
" Fever		8							6	1	1							8
" Mania		1							1									1
Rupture of Uterus		2							2									2
		32						2	17	8	4		1					32

9. *Organs of Locomotion.*

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Caries of Vertebra	1												1					1
Disease of Hip	2								1	1								2
" of Spine		1					1											1
Rheumatism	1								1									1
	4	1					1		2	1			1					5

10. *The Integumentary System.*

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Purpura Hemorrhagica	6	2	1	2	1		1	1	1		1							8

11. *Old Age.*

Old Age	8	22											3	9	13	4	1	30

12. *From External Causes.*

	Male.	Female.	Under 1 yr.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	100 to 110.	Total.
Asphyxia	7	4	10	1														11
Burns and Scalds	2	5		2	1	1			1		2							7
Casualties	20	4	3		3	3	1	2	4	1	4	2	1					24
Drowned	40	6				6	4	3	10	14	6	3						46
Fracture of Leg,	1							1										1
" of Pelvis,	1								1									1
" of Skull,	1									1								1
" of Spine	1							1										1
Gun Shot Wound,	2						1		1									2
Hydrophobia,		1							1									1
Intemperance	10	10							5	6	5	4						20
Poisoning	1	2	1		1			1										3
Suffocation		2	1	1														2
Suicide	1	3							3	1								4
	87	37	15	4	5	10	6	8	26	23	17	9	1					124
Still Born	66	71	137															130
Unknown	37	23	28	1	3				4	10	6	7	1					67

TABLE NO. 3.

Deaths for the Third Quarter of 1853, *at fifteen distinct periods of life.*

Under 1 year,	794
1 to 2	363
2 to 5	215
5 to 10	90
10 to 15	47
15 to 20	97
20 to 30	342
30 to 40	276
40 to 50	215
50 to 60	151
60 to 70	112
70 to 80	70
80 to 90	35
90 to 100	10
100 to 110	1
	2818
Still Born	137
Total,	2955

Embraced within the foregoing tables, were 221 from the Blockley Alms House, 175 persons of color, and 35 from the country, as follows:

	July.	August.	September.	Total.
Almshouse,	57	93	71	221
Blacks,	59	66	50	175
Country,	13	17	5	35
Total,	129	176	126	431

A Case of Traumatic Tetanus successfully treated by Anæsthetic agents. By T. F. BETTON, M. D., of the Borough of Germantown, Philadelphia county.

On Thursday, September 22d, 1853, I was called to see a young man of some nineteen or twenty years of age, boarding at Rockville Place, (the residence of Capt. J. D. Miles,) in this borough. He was supposed to be affected with cholera, or yellow fever, and the alarm of the inmates of the house was not inconsiderable. I saw him about 6 o'clock, P. M., and found him laboring under intense pain in the nape of the neck and back of the head, and also in the right hypochondriac region, extending towards the epigastrium. The history of the case given to me was, that he had arrived in the 11 o'clock train from Philadelphia, and walked over to Rockville, a distance of one and a half miles, feeling very well; nothing peculiar was observed about him. He himself informed me that about 3 o'clock, P. M., feeling a desire to evacuate his bowels, on retiring for that purpose he was seized with great pain in the bowels, accompanied by vomiting and purging. These circumstances, with the addition of a violent convulsion, gave rise to the idea of cholera. When I saw him he was strongly convulsed and agitated by the spasms so characteristic of tetanus, (opisthotonos,) which I, at once, supposed the disease to be. On questioning him, however, as to whether he had recently received any sort of wound, he replied in the negative. I then concluded that I was mistaken, but his mind, up to that time, not being very clear, I determined to act on my first impulse, and treat the case as one of tetanus. I gave him, at once, a large dose of Hoffman's anodyne, and tr. valerian with tr. opii, the only remedies at hand. His spine was also freely rubbed with a liniment composed of aq. ammon. fort., ol. succ. rect., spts. terebinth, and tr. opii, in equal parts. A pill of one grain of calomel, and half a grain of opium, was directed to be given hourly. I visited him at 10 P. M., and found the spasms still as strong as ever, but his mind being somewhat improved, he informed me that some three weeks previously, (in this he was incorrect, it was but one week,) he had been hurt by a nail in his foot. On examining his foot, no mark of injury could be discovered, but great tenderness on pressure existed near the ball of the great toe. I made a deep incision in the

part affected, without any apparent benefit. Continued the remedies during the night, with the addition of tr. cantharid., and tr. capsici to the liniment.

Friday, 8 o'clock, A. M.—Condition worse. Inability to swallow, difficulty of speech, and, thinking himself dying, he had taken leave of his friends. Spasms increasing in frequency and intensity. Having provided myself with a mixture of three parts of sulphuric ether to one of chloroform, I instantly caused him to inhale it. The result was most gratifying. The spasm ceased as soon as the anæsthetic exerted its influence, and he became calm. In a few moments he was able to swallow some brandy and water. The original treatment was continued, with directions to let him inhale the ether whenever a spasm began to manifest itself. 3 o'clock, P. M.—Progressing favorably, spasms perfectly controlled by the remedies, which were continued. 7½ o'clock, P. M.—My friend Dr. Ashmead, of this borough, saw him with me, and approving of the treatment, it was continued. My friends, Dr. Squire, and Mr. Henry, student of medicine, having kindly consented to watch him during the night, he was left to their care, and I have sincere pleasure in saying that, to their judicious attention, skilful nursing, and management of the anæsthetic, his life is mainly due. A mixture of chloric ether and chloroform was freely administered during the night, (about every fifteen minutes for four hours,) whenever an indication of spasm was present. Beef tea and brandy and water were also given.

Saturday, 8 o'clock, A. M.—Much improved, free from spasm. Seven o'clock, P. M.—Doing well, had a slight spasm at eleven A. M., and one, more slight, at three, P. M., none since.

Sunday.—This day was passed in tranquillity, his appetite is good, and condition in every way favorable.

Monday, 9 o'clock, A. M.—Improving rapidly, and may be fairly considered convalescent. He has been entirely free from spasm for about forty-two hours.

Tuesday.—Has discharged his doctor, and considers himself well.

I now regret that I did not employ the chloroform on Thursday evening, instead of waiting until Friday morning, as he would have been saved some spasms. To the anæsthetic *alone* I

attribute his recovery, and its influence appeared almost miraculous. May it not be equally valuable in hydrophobia?

A Synopsis of a singular case of Transposition of Viscera, reported to the Medical Society of Delaware, at its Annual Session, held at Dover, June 8th, 1853. By HENRY F. ASKEW, M. D., of Wilmington, late President.

The subject was a little girl, æt. seven years, and daughter of ——— ———, of the city of Wilmington, Delaware. During the month of March, 1853, she suffered for several weeks from an attack of typhoid fever, accompanied with periodical cephalalgia. From these she apparently entirely recovered, and on the 12th of June, she again became indisposed. Her illness was supposed to proceed from eating unripe fruit. Medical attention, however, was not sought until the afternoon of the 16th, and then on account of convulsions, which, though mitigated, were not entirely relieved, except by death. About twelve hours after death the following autopsic phenomena were revealed, viz., the dura mater strongly adherent to the cranium with exudation of lymph, the blood vessels exceedingly injected with dark blood, and spots of lymph beneath the dura mater. The ventricles contained a large amount of serum, and the substance of the brain appeared softened.

A considerable number of cherry stones were found in the alimentary canal; the glands of Peyer had been diseased, and were evidently healing. The mesenteric glands were greatly enlarged. The viscera of the thorax and abdomen were entirely transposed, so that the appearance was such as would be presented from a reflected surface. The apex of the heart was on the right of the median line, the aorta arching off to the right, and extending down the right side of the spinal column. The right lung had but two lobes, the left lung had three. The liver was mostly on the left side of the body, with the gall bladder also on the left side, whilst the spleen occupied its corresponding position on the right. The stomach had its cardiac orifice on the right and the pyloric on the left. The caput colli was attached to the left side, and the descending colon was on the right.

The health of both parents is good, and the size of the little

patient was such as generally corresponds to her age. Her health, until the attack of typhoid fever, had always been excellent, and no occurrence had ever led to the suspicion of the transposition which was developed.

"*On the frequent occurrence of Indigo in Human Urine, and on its Chemical and Physiological Relations.*" By ARTHUR HILL HASSALL, M. D. Physician to the Royal Free Hospital, &c.

[The following is an abstract of a very interesting paper, by Dr. A. H. Hassall, read at one of the late meetings of the Royal Society, London. Its publication may, perhaps, induce others to repeat Dr. H.'s investigations, with the object of defining more especially than he has done, the diseases in which the blue indigo occurs, so that the discovery may be applied to a practical purpose in diagnosis.] S. L.

The author was led to the investigations laid before the Society in the above communication, by the following circumstances:—

Some three or four years since, when examining urinary deposits under the microscope, he frequently observed in the field of vision, particles of a deep blue color; so often did this occur that he could not even then help suspecting that their presence was not accidental; however, no analysis of the blue coloring matter was made at the time, and the circumstance was in a fair way of being forgotten, until the recollection of it was revived by another occurrence.

In June 1852, a sample of urine, freely exposed to the air in an open vessel, was observed after four or five days, exposure, gradually to change color; the pellicle or scum which had formed upon the surface of the urine became first slate-color, and at length deep blue, with here and there a rust-red tint. The urine also underwent at the same time some remarkable changes; it became thick and turbid, deep brown, greenish, bluish-green, and finally of a faded yellowish-green color; a considerable sediment was found at the bottom of the glass; this was deep brown, intermixed with a little blue coloring matter, and it had a medicinal smell resembling somewhat that of *Valerian.* In this state, without undergoing any further material changes, the urine remained for many days.

Examined with the microscope, the scum or pellicle on the surface was found to consist of vibriones, innumerable animalcules, and crystals of triple phosphate, with a great many fragments and granules of a deep and bright blue color.

A second sample of the same urine was therefore procured, every precaution being taking to avoid fallacy. Gradually the same changes ensued as in the first sample, and this likewise became blue. Having thus ascertained that the changes observed were due to something contained in the urine itself, the author next proceeded to set aside in open vessels a series of urines all from the same patient, noting the alterations which occurred from day to day; these samples underwent nearly similar changes, but the quantity of blue coloring matter and brown extractive gradually diminished, until at length they were present in such small amount as to be visible only under the microscope, and at last they entirely disappeared.

The result obtained from an examination of the *urine*, the *blue coloring matter* and the *brown extractive*, are then given by the author; they are as follow:—

The urine.—The urine of the second sample at the time of analysis, when shaken, had a dark greenish-brown color; but on standing at rest for some time, the coloring matter fell to the bottom, forming bluish-green flocculi, while the supernatant liquid was of a deep wine-red color. The bottle was set aside corked, for ten days, at the end of which time the bluish-green precipitate had entirely disappeared; but on removing the cork and allowing free access of air for some time, the colored deposit was again produced. This was washed with water, drenched with hydrochloric acid, and finally dried; by this means was obtained a rich blue powder possessing all the chemical characters and properties of indigo.

The urine that was filtered off from the above precipitate was allowed to evaporate spontaneously, by which means it yielded an additional quantity, which adhered in the form of very small flakes to the sides of the dish. It also gave a rather large proportion of a deliquescent brown coloring matter, which was treated, first with alcohol, and then with water.

The alcohol acquired a deep brownish-red color, and the water a dark brownish-red green. Both of these solutions were evapo-

rated at a temperature of 160° Fahr. The alcoholic solution furnished a rich brown extractive which was soluble in water, but not in dilute acids, and nitric acid did not produce that play of colors which is characteristic of bile-pigment; nor did the precipitate formed with basic acetate of lead furnish a purple liquid with alcohol and free acid. A strong solution of potash dissolved the extractive and yielded a deep blood-red fluid, which was rendered green and opalescent by boiling. These reactions show that the brown pigment was somewhat like hæmatine in its chemical manifestations.

While the aqueous solution of the brown matter was undergoing evaporation, it gave a further supply of indigo, which was formed most freely at the edge of the liquid. The residue was made black by concentrated sulphuric acid, and deep brown by potash.

The blue coloring matter.—Of two samples of this in a dry state, mixed with a large quantity of earthy phosphates, vibriones, mucus, and epithelium, one gave a dark brown solution with concentrated sulphuric acid, and the other a dirty blue. Both of these solutions were decomposed by water, furnishing in the former case a dark brown deposit, and in the latter a dirty green. In most of their other reactions, however, they presented the characters of indigo; and it is especially deserving of notice, that they were reduced by lime and sugar, giving a liquid from which hydrochloric acid threw down a greenish-blue precipitate.*

The brown extractive.—The brown extractive yielded nearly the same results as on its first analysis, and the aqueous solution furnished a few blue flocculi. A portion of the alcoholic extract was heated with Liq. Potassæ for the purpose of ascertaining whether it contained leucine, and the product, on being treated with hydrochloric acid, gave off a powerful odor, which was somewhat like *valerianic acid;* but the result was too doubtful to be of much value. The author had already referred to the peculiar smell of *Valerian* emitted by the extractive of more than one of

*The cause of concentrated sulphuric acid giving with one of these samples a brown solution, and with the other only a dirty blue, was, the author considers, mainly owing to the large quantity of animal matter with which the specimens were contaminated; the acid from its charring effect on this, would produce a brown, or blackish solution, thus obscuring the color of the solution of indigo.

the samples. He considers that the clearest and most positive evidence was thus obtained that the blue coloring matter in this case was indigo.

It was not very long after the occurrence of the first case of blue urine that numerous other instances fell under the author's observation. The urines of all these cases underwent very nearly the same changes as in the first; in some the quantity of blue coloring matter found was very considerable, in others less; and in the third class of cases the microscope was necessary for its discovery. In nearly all these cases the blue coloring matter was submitted to analysis and ascertained, on the clearest evidence, to be indigo.

The author in the next place considers the question of the source and origin of indigo in the urine.

It appeared that in the cases related by the author, colored indigo was not present in the urine when first voided, but that it was gradually formed some time afterwards by a process of oxidation or exposure to the air, being in most of the cases probably derived from the brown extractive, which in its chemical manifestations so closely resembles hæmatine.

The author contrasts *cyanourine* with the indigo detected in uline. He observes that the most distinctive tests laid down for cyanourine are its solubility in boiling alcohol, and the action of sulphuric acid upon it, which gives a reddish-brown solution; and states that he had ascertained that these tests are not to be relied upon, since indigo, when contaminated (as in the urine it frequently is) with a large quantity of animal matter, vibriones, &c., gives a reddish-brown solution with concentrated sulphuric acid, from the charring of the animal matter, and in many cases forms a bright blue solution with boiling absolute alcohol; hence he could not help suspecting that cyanourine and indigo are very closely connected with each other, if they be not identical. He observes, it is at least singular that while so many cases of indigo were met with, not a single instance of cyanourine presented itself. He also contrasts indigo with apoglancine, and remarks that this is acknowledged by Heller himself to be nothing more than cyanourine mixed with urrhodine.

Take then into consideration the whole of the facts described in this communication, and the followiug conclusions are deducted:

1st. That blue indigo is frequently formed in human urine, the quantity being subject to the greatest variation; in some cases it is so considerable as to impart a deep green, or bluish-green color to the whole urine; a pellicle of nearly pure indigo also extending over the entire surface of the liquid; while in others it is so small that it can only be detected by means of the microscope.

2d. That for the formation of this indigo, it is in general necessary that the urine should be exposed to the air for some days in an open vessel, oxygen being absorbed and the blue indigo developed. Whatever, therefore, facilitates oxygenation, a free exposure to light and air, warmth and sunshine, hastens the appearance of the indigo; hence in summer the changes described take place much more quickly than in winter; on the contrary, the changes are retarded and even stayed by the exclusion of the atmosphere. Blue indigo may even be deprived of its color and reformed, alternately, according as air is excluded or admitted to urine containing it. From some of the cases recorded, it would appear, however, that blue indigo is occasionally formed in the system, and is voided as such in the urine.

3d. That there is usually found with the blue indigo, where the amount of this is considerable, a brown extractive, sometimes in large quantity, the aqueous solution of which, by exposure to air, yields a further supply of colored indigo, and which closely resembles hæmatine in its chemical manifestations and elementary composition. There is therefore great reason for believing that in the majority of the cases here recorded, the blue indigo was derived from altered hæmatine, although it is at the same time probable, that in some cases it is formed from modified urine pigment, which is itself supposed to be a modification of hæmatine. Between the greater number of the animal coloring matters there is the closest relationship in chemical composition, so that the transformation of the one into the other would appear to be both easy and natural.

4th. That the urines in which the colored indigo occurs in the largest quantity, are usually of a pale straw color, readily becoming turbid, alkaline, and of low specific gravity. Small quantities of indigo are however found in urines possessing characters the very reverse, that is, in such as are high-colored, acid, and

of high specific gravity; but as a rule, in these urines the blue pigment is usually absent.

5thly. That as colored indigo does not occur in healthy urine, and since, where the amount of this is at all considerable, it is accompanied with strongly-marked symptoms of deranged health, the promotion of blue indigo in urine, must be regarded as a strictly pathological phenomenon, apparently associated rather with some general morbid condition, than essentially with disease of any one organ; although there is reason for believing that the blue deposit is met with very frequently in Bright's disease, and in affections of the organs of respiration, it should however be remarked that none of the worst cases of indigo in the urine which the author met with, were cases of Bright's disease.

The paper is illustrated by drawings, and a specimen of the indigo, as deposited from urine, was exhibited.—*Philosophical Magazine*, Sept. 1853.

On the Diseases and Injuries of Seamen. By G. R. B. Horner, M. D., Surgeon U. S. Navy, Philadelphia.

Rubeola, Parotitis, and Tonsillitis.

During my whole term of active service, I have only known the crew of one vessel to be affected with measles, and that was the crew of the Delaware, who were infected at Norfolk just after she fitted out. The disease soon became epidemic, and was still lingering in her when I joined her three months after it first appeared. It principally attacked the boys, was accompanied with ordinary symptoms, fever, soreness of throat and eyes, but these were sometimes most affected, and remained inflamed for a long time. Indeed, so much ophthalmia preceded, accompanied and followed the measles, that they seemed to have tainted the eyes of many persons in a most extraordinary manner. For though the measles were without exception cured, yet the ophthalmia was the most obstinate ever met with by me. Some of the cases were perfectly incurable, the conjunctiva becoming granulated and chronically inflamed. Local and general depletion, astringent lotions of the greatest reputation, citrine ointment, the nitrate of silver, and all other remedies thought appropriate, were tried in vain. Consequently some of these cases

had to be sent on shore before the ship sailed, and others to the United States after she arrived in Brazil. With the exception of these cases, I have very rarely failed in subduing ophthalmia by means of the medicines specified; weak solutions of sup. acet. of lead, the nitrate of silver, and sulph. of zinc, warm bathing, cathartics, antimonials, blue mass in moderate quantities, and by occasionally using leeches and poultices to the eyes, and blisters on the nape of the neck. Setons also were employed in some cases of the worst kind with doubtful efficacy, and bathing with warm water in those of every class, as it was much more soothing than cold. The former lessens action, relaxes the inflamed parts, causes a free secretion from the meibomian glands and eyes, renders them more sensible to the action of cold, or astringent lotions, and thereby indirectly produces a tonic effect. When inflammation ran high in the above and like cases, scarification with a lancet on the inside of the lids was frequently performed. In some instances, however, it seemed to increase rather than diminish irritation, either from the great sensitiveness of the parts, or from an increase of tears having been caused to flow over the incisions.

For the cure of the measles, the remedies most prescribed were cooling drinks, seidlitz powders, and other gentle cathartics. Collyria, alum gargles, and brown mixture were given to the patients whose eyes, throats, or respiratory organs were much affected.

Into two of the ships mentioned another contagious disorder was introduced—the mumps, or technically speaking, cynanche parotidea. The first ship infected was the United States, and it was thought at New York, as she sailed from thence, though the disease appeared on the seventeenth day afterwards, and when she was two-thirds across the Atlantic. The period of incubation, therefore, was nearly three weeks, if not more, unless the disease originated on board, which is improbable. The first case was that of a man who had the usual symptoms and was cured of them, but seized with orchitis twelve days after he was taken under treatment. Another man had mumps in a reverse manner, the right testis having been tumefied and inflamed before he had the parotids sensibly affected, and the jaws made stiff. In a third case, the submaxillary glands were also enlarged, and as much,

if not more so, than the parotids. Altogether, twenty cases happened, and the last one upon the 28th of August, that is sixty-three days after the appearance of the first case. Most of them were of a mild kind, but six were attended with orchitis of one or both testes, and the average cure was effected in seven and a half days. The youngest patient was seventeen years old, and the eldest thirty-eight years. Three more persons were above thirty, and ten were from seventeen to twenty-two years old. In the Savannah only ten persons had the disease; the youngest was a marine drummer of ten years, and the eldest a seaman of twenty-eight. Most of these cases were also of a mild character, and all were undoubtedly owing to contamination at New York, where the ship was when the first took place, though three did so at Boston, and four others after she sailed thence for the Pacific. In each vessel the disease seemed to continue until every person liable to it had been affected, for the last one in the United States was taken sick in the Archipelago, and the last patient in the Savannah when she had been at sea twenty-seven days, and was near Brazil. The average period of cure for the cases in the latter frigate was short of six days, although several of them, from the severity of the cold, were accompanied with tonsillitis.

The ordinary treatment was to give Epsom salts and tartar emetic in combination, to purge well. Sometimes the castor oil was given, or an emetic of ipecac. and tartarized antimony, when the testes were attacked. Afterwards the sick took the spiritus mindereri, or a solution of the last named medicine, rubbed the volatile liniment over the parotids, and wore hot linseed poultices over them. Their diet was low, their drinks cooling when fever ran high. In two cases this happened to such a degree as to demand free venesection, and in those where the parotids and testes were much inflamed leeches were applied. When the testes were attacked, blisters were occasionally substituted for volatile liniment to the parotids, and an evaporating lotion of water, alcohol and sup. acet. of lead were applied to the former instead of poultices. By the use of the above remedies all the cases were cured, but one of those in the United States was under treatment twenty-eight days, from being complicated with catarrh as well as orchitis. In the cases accompanied with tonsillitis,

gargles had to be used, and I also, agreeably to my practice in that disease, lanced the tonsils freely. This very much shortened the treatment, and relieved the patient of pain and difficult deglutition, by disgorging the blood vessels and preventing swelling and suppuration. In fact, freely lancing the tonsils does in a few minutes what may require days or months to accomplish with medicines. It also prevents the part from remaining indurated and swelled after the inflammation has subsided, and saves thereby the necessity of excision. Were this practice generally adopted, in conjunction with appropriate medicines, the above operation would become almost obsolete. Certain it is, that I know of no instance of its having been required after I had treated tonsillitis—and many cases have been seen by me—of persons who had enlarged tonsils, ascribable to the neglect of incisions into them while inflamed. To make them, a lancet firmly fixed between the two sides of the handle was most used, but the blade is apt to turn to the right or left, and is too short to reach the glands unless the fingers holding the instruments are partly thrust with it into the mouth. For these reasons, a small straight scalpel is preferable, and the patient having had the lower jaw and tongue firmly depressed by means of a spoon handle or spatula, without being thrust so far back as to cause gagging, the point of the scalpel should be passed directly through the projecting portions of the glands. By doing this, a copious flow of blood will be obtained without danger of puncturing the external walls of the fauces and cutting the internal carotid arteries in their passage to the base of the cranium. Such an accident could only happen from great carelessness,, awkwardness, or ignorance of the anatomy of the parts, and is not more liable to occur than that of leeches—recommended by some—getting into the stomach or larynx, either before or after application. These reptiles likewise are very disgusting and horrifying to many patients, even when they are externally applied, and few would submit to their being introduced into their throats. This difficulty might be obviated by their being used externally, but they would be less efficient and would have to be applied in larger numbers, and this would be very objectionable where they are scarce and the patients poor, or the leeches very dear, as at Lima, at which city they cost a dollar a piece by the hundred. At sea, too, it is

difficult to keep a supply of them; often they cannot be had for any price, and for these, if for no other reasons, it is preferable to employ incisions. But though these possess such efficacy, they were not relied on alone, were frequently not required, and always assisted by medicines. The gargles mentioned were used, likewise some made of the nitrate of potash dissolved in sweetened water, in the proportion of ʒi. or ʒij. to ℥vij., and others of Cayenne pepper, molasses, and vinegar, and of like proportion. In the majority of cases, however, a gargle of ʒij. of powdered borax, ʒi. of honey and ℥viij. of strong sage tea was found the most pleasant and useful, and most prescribed. In severe cases antimonials, and other diaphoretics, eathartics, frictions over the throat, and hot pediluvia were used. Hot poultices applied externally to the affected part after friction with volatile liniment and turpentine or some other stimulating one, afforded much relief, and the same benefit may be derived from filling a small bag with wood ashes, wetting them with warm ley, and fastening the bag about the patient's throat while he is reposing. This is a domestic remedy which I have seen used in country practice, but a very good one, from its combined fomenting and stimulating properties, which promote perspiration, and divert irritation from the fauces to the integuments.

Surgical Cases. By GEORGE W. BROWN, M. D., of Port Carbon, Pa.

(Continued from No. VII)

CASE IV. Jonathan D., a stable-man, fifty years of age, five feet ten inches high, pretty well made, but of rather dissolute habits, came into my office November 9th, 1852, with his arm supported in a sling, and desired me to examine his shoulder. I stripped him, and at a single glance, I saw he had a dislocation of the right os humeri into the axilla. The shoulder was flattened, the acromion process of the scapula very prominent with a depression immediately under it, the arm was immoveably fixed, and the head of the bone could be felt in the axilla.

The history he gave of his case was that two weeks previous he went to Pottsville for a load of feed, and he drank rather freely, and when he came home he opened one of his bags, and

took hold of the mouth with his right hand, and placed it upon his right shoulder, and in attempting to walk a plank from his waggon to the stable with his load, he was precipitated to the ground a distance of three feet, and as he fell he felt something give way in his shoulder, and when he arose he suffered severe pain in the part, and found the arm immoveably fixed. He immediately called in a neighboring physician, who came, and made extension for some time, and finally told him it was reduced. He placed a pad in the axilla, put the arm in a sling, and then forced the elbow as close to the side as he could with a bandage placed around the arm and body, and left. He called the next day, and as he was suffering acute pain he insisted the bone was not in its place, but the Doctor gave him a liniment to rub his shoulder, assuring him that it was reduced; and thus things stood when he came to me, the pain never ceasing in his shoulder for one moment. I placed him in a chair and applied a proper apparatus, and after torturing my patient for some time, and breaking the belts attached to it, I removed it, and placed him upon his back upon a buffalo robe upon the floor, and setting down beside him I placed a ball of wick yarn in his axilla, and drew my boot and placed my heel upon it, and seizing his wrist with both my hands at the same time directing an assistant to seize me by the shoulders from behind, and another to seize him in the same way, and so on till I had the force of four men, when at a given signal we all made gradual but continued extension for about three minutes, when the bone slipped into its place with an audible snap, and immediately the patient was relieved, and the free motions of the arm were restored. The arm and hand were very much swollen, and he complained of great numbness of the entire limb, with the total loss of the power to contract his fingers, but this I attributed to the pressure of the pad in the axilla upon the vessels and nerves of the arm; but after having applied such remedies as reduced the swelling, I discovered a dislocation of two of the bones of the carpus, but the inflammation and consequent adhesions were such as to forbid any attempt at reduction (if indeed that is possible under any circumstances,) and to destroy almost entirely the use of the hand. He has at this date very free use of the arm, but very little of the hand.

Case V. I was called to see Thomas D., a miner, 30 years of

age, about five feet ten inches high, and very large and muscular, at 8 o'clock, P. M., Sept. 21, 1852. On examination I found a dislocation of the femur directly backwards upon the dorsum ilii. He was suffering a good deal of pain, and upon comparing the two bones of the thigh, the dislocated one was from two to three inches shorter than the other, and immoveably fixed. The history he gave of his case was, that as he was coming out of the mines he stopped to talk to some one, and while doing so he leaned his back against one of the gangway timbers, and placed his left foot upon the bumper of an empty car that was standing on the track, and while in that position a loaded car came down the track and struck the car upon which he had his foot, and carried it forward with such force as to flex his leg suddenly upon his thigh, and thereby strike his knee, and his back being firmly fixed against the gangway timber offered so much resistance that the head of the femur was carried directly backward into the position in which I found it. I secured a staple into the surface upon one side of the house, and into the door casing upon the other, each being about three feet from the floor. I then placed a bed upon the floor and placed the patient upon the sound side upon it, and applied the compound pulleys in the usual way, and kept up extension and counter extension for nearly an hour with two men at the pulleys, when the patient positively refused to let me go on with my efforts, unless I put him under the influence of chloroform. But having very lately read of a number of cases terminating fatally from the use of chloroform in the hands of those who were in the habit of useing it constantly, I thought it best to have a consultation before proceeding further. I therefore gave the patient an anodyne, and directed him not to be moved, and adjourned the case until nine o'clock the next day.

At the time appointed, Dr. Carpenter met me in consultation, and I applied the pulley in the usual way, except that I applied the extending band to the ankle, instead of applying it immediately above the knee, as is usual, in consequence of the excessive developement of the muscles of the thigh, which made the link so tapering near the knee as to render it impossible to keep the extending band in position, while applying the necessary force. I now set the patient up in bed, with all the apparatus

properly applied, and tied up his arm and made a very large orifice, and let the blood flow till he was on the point of fainting; when I immediately arrested the flow of blood, and commenced administering the ether (thinking that less dangerous than chloroform) and as soon he was completely under its influence, we placed him in position and commenced gradual extension, but before we had made it sufficiently long, the staples gave way and we were obliged to desist. We now laid the patient down and sent for a carpenter, and had the staples so secured as to prevent their giving way, at the same time raising the one attached to counter extending band to almost five and a half feet from the floor, so as to make it bear in such a way, as to assist in lifting the head of the bone from its malposition. We again placed him completely under the influence of the ether, and put four men to the pulleys, and two to the transverse band, when I took charge of the lifting band, and Dr. Carpenter the leg. After applying our force very gradually and keeping up extension for about five minutes, the head of the bone slipped into its place, with a very loud snap, and in letting him down the motions of the limb were restored, and it corresponded in every respect with its fellow. I placed him in bed and applied a bandage, so as to confine the injured limb to the sound one, and in a few minutes (the effects of the ether having passed away,) the patient expressed his gratitude for relief, in the warmest terms. I gave him a liniment to be applied to his hip, and directed him to be kept quiet in bed for a few days. At the end of ten days he was walking about with a stick entirely restored except a feeling of weakness in the vicinity of the joint.

Case 6.—I was called to a neighbouring beer house, in a great hurry, Nov. 23, 1852, to see Thomas C., a boatman 25 years of age, stout, thick set and very muscular, whom I found very much intoxicated, and two or three of his comrades holding him to restrain him from injuring himself; and others around him. He had a silk handkerchief bound tightly around his right arm, and he was covered with blood, as was the floor, ceiling, and sides of the room, and indeed everything in it. The history of his case was, that some fifteen or twenty minutes previous, in attempting to strike one of his companions, he drove his arm through a pane of glass in the window, dividing the muscles of the forearm down

to the bone, about the junction of the lower with the middle third; at the same time dividing the radial artery. He drew his arm back and drove it down a second time upon the sharp pieces still hold in the sash, when a small pointed piece penetrated the fore-arm about one inch above the first wound, and divided the radial artery a second time. The blood was still flowing from under the handkerchief, which had been bound around the arm by the by-standers. I immediately placed the thumb of an assistant upon the brachial artery, directing him to hold it firmly till I returned, when I came home and procured my horse shoe tourniquet, and applied it over the artery, and had him removed to his own house. By the time he was taken home and placed in bed, he was so overcome with the loss of blood and the effects of the liquors that he offered no resistance whatever, but was as passive as a child. I placed him upon his back in bed, near the edge, and drew his arm out over the side, and had it held firmly by an assistant. I now made an incision obliquely over the course of the artery, about one inch above the upper wound; but in consequence of the tissues being bathed in blood, I found it very difficult to apply the ligature, but I finally succeeded; but as the flow of blood still continued, I was obliged to apply a ligature to the lower end, which I did in the large wound, without much trouble, and then brought the wounds intact by several stitches of the interrupted suture and adhesive straps. I also applied a bandage pretty tightly, commencing at the ends of the fingers, and as I passed up with the bandage I applied a compress over the wounds. I ordered perfect quiet, and cold water dressings as soon as reaction came on.

November 26th, 9 o'clock, A. M.—Patient rested pretty well till near morning, when he became restless and uneasy. He is now very restless and feverish, with a good deal of pain in his head and arm, pulse 112, tongue white, dry, and very thirsty. To have calomel ʒss., to be divided into three equal parts, one to be taken every two hours, and to be followed by senna and salts, in divided doses till it operates freely. 10 o'clock, P. M. The medicine has operated very freely, less pain in the head and arm, less thirst, but very nervous and restless. To have one fourth of a grain of the sulph. of morphia every hour until he rests well, and to have cold lemonade for a drink.

November 27th, 9 o'clock, A. M.—Patient passed a very good night. Better in every respect. Continue treatment. My patient from this time on continued to improve, the ligatures coming away on the tenth day, and by the end of the third week he had entirely recovered. He now experiences no inconvenience in using his arm whatever.

Case 7.—I was called to see Mary S——, aged seven years, a child with light hair, blue eyes, a very fair skin, and altogether of a very delicate make. At the time I was called she was laboring under a very high fever, face flushed, with a purple spot on each cheek, rapid breathing, short dry cough, pulse 120, tongue covered with a white fur, and very thirsty, skin hot and dry, and severe pain in the left breast.

Physical Symptoms.—Complete hepatisation of the left lung, as shown by a dull sound over the entire lung, and the absence of the healthy respiratory murmur, and the existence of tubal respiration. Decubitus always upon the left side. I bled her freely till near syncope, and gave her an antimonial emetic, to be followed by calomel in five grain doses every four hours, with mucilaginous lemonade for drink, and flying sinapisms to the chest and back.

November 24th.—Patient somewhat relieved, pulse still 120, but less corded, cough still dry, pain less acute, but still severe, skin still dry and husky, and the tongue covered with a yellowish fur, particularly near the root, and the physical signs much the same as yesterday. Blood drawn yesterday cupped and buffy, clot very firm. Emetic operated very freely, and caused her to throw up large quantities of tough white mucus, but no blood. The calomel has operated very freely upon the bowels. Continued calomel and antimony in small doses every ten hours. Flying sinapisms to the chest and back, and cold lemonade with gum acacia for drink.

November 25.—Patient is still very much the same, but more feeble in consequence of the bowels being very loose. Discontinue calomel and antimony, and to have iodide of potassium, three grains every four hours, with tinct. opii and camph. in the syr. sarsaparilla compound. A liniment of equal parts of the ol. terebin., acid acetic, and ol. olivæ, to be rubbed to the chest, and

to be covered with carded cotton constantly. Dov. pulv. with the hyd. c. cretâ at bed time. Continue cold mucilaginous drinks.

November 26th.—Patient considerably improved, but the mother complains that she cannot give the medicine, as she is very obstinate, and spits it out as fast as it is administered. The same kind of treatment was ordered to be continued, but very little could be done, as she would not take the medicines, and the parents would not force her, as they had made up their minds that she was going to die, although I had assured them if they could get her to take her medicines I thought she would recover, and thus things continued up to the 6th of January, 1853; some days taking one dose of her medicine, some two, and some none; some days being a little better, and on others a great deal worse. I had not seen her since the 21st of December, as I had discontinued my visits in consequence of their not compelling her to take the medicines. I now found her laboring under all the symptoms of abscess of the lung. Pulse 130, small and weak, cheeks flushed, skin bathed with perspiration, particularly when she sleeps, bowels very loose, tongue clean, shining, and very red, and on examining the chest I found the dulness much the same as at last report, but in the intercostal spaces between the sixth and seventh, and seventh and eighth ribs, immediately below the axilla, I found a very considerable bulging, and I thought I could detect fluctuation. I ordered a warm poultice to be kept constantly to the side, and a continuance of the iodide of potassium and syr. sarsaparilla, with the hydr. c. cretâ at bed time. To have a good diet of animal broths, with a little wine or porter three times a day.

January 10th.—The enlargement in the intercostal spaces becoming more prominent. Patient in much the same condition as at last report, except that the appetite has improved some, but her breath is very offensive, and a few evenings since, in an effort at vomiting, she threw up a small quantity of very offensive pus. I now prepared to operate upon the child, and draw off the matter with a trocar, but this the parents resisted, and would not hear of such a thing. Continue treatment as before.

January 14th.—Patient still much the same as at last report, except that she is becoming exhausted more rapidly. Friends

still resist an operation. Continue treatment as before, except that she is to have the ol. jecor. aselli, in teaspoonful doses every four hours, in porter, and the hyd. c. cretâ every four or six hours, as may be necessary to restrain the bowels.

January 20th. The disease has progressed much more rapidly towards a fatal termination since last report. Her breath has become so very offensive, that the family can scarce remain in the room with the door closed. Parents have now consented to an operation, they being satisfied that she must die in a very short time without an operation, and that she can but die with it. Continue the treatment, with the addition of the elixir of vitriol in ten drop doses, three times daily.

January 21st. In the presence of and with the assistance of Dr. J. Carpenter, after drawing the skin directly upwards and making it tense, I made a slight incision immediately over the upper edge of the 8th rib, and then passed the trocar and canula into the chest, and drew off about ten ounces of extremely offensive pus of a greenish color. The air passed in and out of the canula as she inspired and expired. Blood flowed freely from the wound after removing the canula, but ceased upon closing it. After closing the wound with adhesive straps, we applied a compress over it, and bandaged the entire chest from below upwards. She bore the operation very well, and seemed much relieved after it. Continue treatment.

January 26th. Diarrhœa nearly ceased, coughs but very little, breath much less offensive, appetite becoming very good, and she has become very fond of the oil. From this time forward, my patient progressed favorably till March, when the abscess partially filled again; but an opening formed with one of the bronchial tubes, and after a fit of coughing, she was seized with vomiting, and threw up near half a pint of the same kind of greenish pus as before, with perfect relief to all of her symptoms. Some time in April, the same thing took place, but to a much less extent. I examined her *lung* in July, when I found healthy respiration in all parts of the lung except that part occupied by the abscess, which is dull and the side contracted. I have seen her frequently in the last few days, and she appears to be perfectly restored so far as her delicate constitution will permit.

BIBLIOGRAPHICAL NOTICES.

General Board of Health. Second Report on Quarantine. Yellow Fever. With appendices, presented in both Houses of Parliament, by command of her Majesty. London, 1852. 8vo. pp. 414.

This is the second of a series of reports, of great practical value in a sanitary and commercial point of view; the first of which appeared in 1849, addressed to Parliament, on Quarantine and Cholera. We are advised that the third Report will contain the decisions of the International Sanitary Conference which has just terminated its labors at Paris.

The names of Edwin Chadwick, Esq., and Dr. J. Southwood Smith, appended to these reports, two of the committee of investigation, appointed by the Board of Health, are a sufficient guarantee of the manner in which the commission has been executed; while the subjects discussed particularly in this second report, now before us, are of a character that will secure for it a careful reading, wherever it can be had.

Indeed it is a source of regret, that this deeply interesting document had not been issued in a form that would insure for it a more general circulation, especially in those countries where Yellow Fever prevails endemically.

This second report presents to the reader several points of absorbing interest. While it purports to be an investigation into the necessity or otherwise of Quarantine laws, it takes hold of and discusses in a masterly manner the subject of Yellow Fever, contributing much towards the solution of several questions, hitherto involved in doubt and obscurity.

The inquiry professes to settle the leading points at issue, viz., the non-contagiousness of Yellow Fever, its domestic origin, and its similarity in type to miasmatic fevers.

The conclusions to which the General Board of Health have arrived, as set forth in this report, after a close and scientific investigation of a large amount of evidence, are presented under fifteen distinct heads, which may be summed up as follows:

That Yellow Fever epidemics may appear in different towns and remote parts of the same town, under circumstances in which communication with infected persons is impossible; that they are usually preceded by sporadic cases, which cases are common when no epidemic prevails; that they do not spread by any rule of gradual progression; that, when the fever is prevalent in a locality, rigid seclusion affords no security; that the entire removal from an infected district, often arrests the progress of the epidemic; that, the disease cannot be transmitted from one person to another in a hospital; that it is local or endemic in its origin, and those causes which influence its location are removeable, and in proportion as they are removed so will the fever subside, or appear in a milder form; that non-acclimatization is a predisposing cause for the disease; that there is no evidence to prove that Yellow Fever has ever been imported; and lastly, that "the means of protection from Yellow fever are not quarantine restrictions and sanitary cordons, but sanitary works and operations, having for their object the removal and prevention of the several localizing conditions, and when such permanent works are impracticable, the temporary removal, as far as may be possible, of the population from the infected localities."

The question, as to the necessity of the present rigid system of quarantine, as a preventive for the introduction of disease from abroad, is taken up and thoroughly investigated. The result of this inquiry is, that they cannot afford any real protection, and "that the substitution of Sanitary and Hygiene measures, for quarantine isolation and restriction, would afford more certain and effectual protection."

While we agree in most particulars with the opinions advanced by the General Board of Health on this subject, and entertain the most reliable confidence in the adoption of a rigid police system, for the prevention and spread of disease, and while we are decidedly in favor of such an entire modification of our quarantine laws, as will forever remove those arbitrary and oppressive features, which, in this enlightened age, ought to be looked upon by our law makers as alike cruel, unjust and injurious to commerce, inflicting unnecessary inconvenience on passengers and seamen, "while they maintain a false security in relation to the means of preventing disease"; we are not altogether

prepared to sanction the propriety of admitting vessels into port that have come from unhealthy places, or that have had infectious disease on board during the voyage, until they have undergone the process of ventilation and purification beyond the limits of the Port.

In regard to the introduction of small pox, however, which forms an exception to the system proposed in this report, we should deem it advisable not only to detain the vessel for purification, but also the crew and passengers, or such of them as are laboring under the disease, until they have recovered.

In the form of an appendix there is an interesting report on Yellow Fever; by J. Gillkrest, M. D., Inspector General of Army Hospitals. The reply of Judge Howell to Sir George Murray, giving the reasons for his opinion (as one of the members of the Board of Inquiry into the origin of the Yellow Fever epidemic of 1828 in that Garrison,) that said epidemic had its origin in Gibralter. Remarks on the Yellow Fever of the West Indies and coast of Africa, by Dr. A. Browne, founded on statistical reports of the army and navy, &c., and a notice of the proceedings of a board of Inquiry held at the office of the army medical department 1849-50, on the nature of Yellow Fever. All of which are interesting and replete with valuable statistical and historical information on the subject of Yellow Fever.

Two beautiful engravings of Gibraltar accompany the book, as well as the Abstract of a Report, by James Wynne, M. D., on Epidemic Cholera as it prevailed in the United States in 1849 and '50—an American work of much merit on the etiology of that fatal scourge to the world.

W. J.

A Practical Treatise on the Diseases of Children. By D. Francis Condie, M. D., Secretary of the College of Physicians, etc., etc. Fourth Edition, revised and augmented. Philadelphia. Blanchard and Lea, 1853. pp. 732.

Dr. Condie's excellent treatise on the Diseases of Children is so familiar to the American profession as a standard work, and it has on previous occasions been so fully noticed in our columns, that we need only now announce the recent appearance of a *fourth* edition. The author's great experience, extensive reading, and familiarity with foreign languages, peculiarly fit him for the execution of such a work; and its value is abundantly proved by the numerous editions which it has reached in a very short period. It is characterized by great clearness and lucidity of style and arrangement, sound pathological views, and precise and plain therapeutical directions. The author claims "to present only those remedies and plan of treatment which he has found from actual observation, made at the bedside of the patient, to be best adapted to relieve or remove the several forms of disease of which he treats. * * * He has not failed, however, o notice every remedy and plan of treatment which comes to us with the recommendation of practitioners of unquestionable authority, even although he may not have had an opportunity of testing its efficacy."

Dr. Condie's remarks on re-vaccination appear to us to present very sound views on this subject. He believes that the system, once fully infected with the vaccine disease, enjoys a "protection against the occurrence of small pox, which is unimpaired with the lapse of time." But he admits and advocates the necessity of re-vaccination, "as a test whether the susceptibility of the individuals to the variolous disease has been fully extinguished." Whatever theoretical view may be adopted on this subject, whether with Dr. Condie, we assume that in a certain number of persons there exists "a greater or less degree of susceptibility to variolous infection, [which is] left unextinguished, and which susceptibility augments in time," or whether we adopt the opinion, "that the protective powers of the vaccine infection become gradually impaired, as the individuals who have been subjected

to its influence advance in age," we think the question of the practical value of re-vaccination is abundantly settled. Our own experience in re-vaccinations, in a large Institution of children, has resulted in about 11 per cent. of cases, in which the genuine vesicle was reproduced in individuals who were supposed to have been vaccinated, and had good scars. And our first experiments with re-vaccination in this Institution, led we think, to very striking evidence of its prophylactic virtues. Two cases of modified small pox occurred in the Institution, during the epidemic which prevailed in this city in 1851. Immediately on the appearance of the eruption, we re-vaccinated all the inmates (over a hundred and thirty.) In twelve, the re-vaccination was successful, a large number had sore arms, with more or less approximation to the genuine vesicle; but no other cases of varioloid or small pox occurred in the Institution.

A Treatise on Diseases of the Heart. By O'B. BELLINGHAM, M. D. F. R. C. S. Member of the Court of Examiners of the Royal College of Surgeons in Ireland, etc., etc. Part 1. Dublin: Fannin and Co. pp. 252.

This work is a republication, with revisions and additions, of Clinical Lectures delivered by the author at St. Vincent's Hospital, Dublin. They appeared originally in the Dublin Medical Press, and London Medical Gazette; and, having attracted considerable attention, have been appropriately re-issued in a distinct form.

"The work consists of two Parts: the first contains a description of the healthy heart, its size, weight, and the measurement of its chambers and orifices; followed by sufficiently full details respecting its motions and sounds. The examination of the heart in disease is then entered upon, commencing with the physical signs; the general signs, and the secondary or remote symptoms of cardiac disease are described in succession. The second part is devoted to the individual diseases of the heart, which are arranged according as their seat is the investing membrane, the lining membrane, or the muscular tissue of the heart, followed by a description of the functional or inorganic affections of the heart."—*Preface, p.* 8.

Part second only has been issued. It will be found to present a clear, concise, and accurate account of the heart, with original and novel views of its motions and sounds in health and disease.

The author rejects both valvular action and muscular contraction as influencing the normal sounds of the heart, and accounts for both the first and second sound as the result of friction between the blood and the parietes of the orifices of the heart. We extract his explanation of the sounds at length.

"*First sound.*—The first sound of the heart we know is synchronous with the ventricular systole : in this act, the blood, compressed by the contraction of the powerful muscular walls of the ventricles, is propelled with considerable force into the aorta and pulmonary artery, the sigmoid and semilunar valves of which are suddenly elevated. In the rapid passage of the blood from a wider to a narrower area, there must be considerable friction between this fluid and the parietes of the arterial orifices ; quite sufficient, in my mind, to produce the prolonged first sound of the heart. This sound necessarily has a distinct character from the second sound of the heart, because the resistance to be overcome is so much greater, and the passage of the blood through these orifices is more gradual ; it is likewise more prolonged, because sound must be developed during the entire period that the blood is passing from the ventricles into the large arteries : and the slower the action of the heart, the more prolonged will this sound be.

Second sound.—The second sound of the heart we know is synchronous with the ventricular diastole : during this act the muscular fibres of the ventricles are relaxed, the cavity of the ventricles enlarges, and the walls of the ventricles re-expand ; the curtains of the auriculo-ventricular valves open, and there is a sudden influx of blood from the auricles through the auriculo-ventricular orifices. It is scarcely necessary to say, that it is not the contraction of the auricles which propels the blood into the ventricles at this period of the heart's action ; nor is the dilatation of the cavities of the ventricles the result of the entrance of the blood from the auricles, as some have supposed. It is not, either, necessary for the production of this sound that the diastole of the ventricles should be an active process like the systole ; the ventricles being hollow muscles, the state of relaxation of their muscular fibres is a state of dilatation of their cavities : hence a vacuum would be created in them if the auricles were not at this period full of blood ready to supply them, but, as the latter had been filling during the whole period of the ventricular systole, this cannot happen, and the blood passes through the auriculo-ventricular orifices in a full and rapid stream, and with sufficient force to generate sound.

That the blood enters the ventricles with considerable force, would appear from what has been observed in experiments upon animals, as well as in the human subject. Cruveilhier says that, in a case of ectopia of the heart in an infant, when the organ was grasped with the hand during the ventricular diastole, it was violently and forcibly opened,—so much so, that he was at first under the impression that the diastole was the active state of the ventricles.

The second sound of the heart is much shorter than the first sound

because the relaxation of the muscular fibres of the ventricles in the diastole is rapid, and the motion is sudden and instantaneous. It has a different character from the first sound, because the blood has no impediment to overcome in entering the ventricles from the auricles."

That friction between the blood and parietes of the orifices of the heart must be an important element in producing the first sound of the heart, we have long believed, and, with the author, we have regarded it as an inconsistency "to reject this element as incapable of producing the normal sounds, while it is set down as the one which almost exclusively gives rise to the abnormal sounds of the heart. We cannot, however, subscribe to the opinion, that friction is the only element in causing the first sound of the heart, for we believe it to be produced by several elements. And we cannot at all understand, how the short, sharp second sound is to be referred to the same cause as the first. Dr. Bellingham dwells pointedly upon its "different character from the first sound," which he attempts to explain by the fact "that the blood has no impediment to overcome in entering the ventricles from the auricles."

We have been for some time disposed to lean to the opinion, that both the sounds and impulse of the heart are best explained by adopting the account of its actions which has been deduced from the observations of Dr. Robinson, of Virginia, and Mr. Beau, of France. According to the cases of these observers (new born infants in whom the breast-bone was wanting) the action of the heart begins with an *active* diastole or dilatation of the organ in all directions, during which its apex is projected upward and forward, and the *impulse* is produced. This active diastole is followed, without observable interval, by the contraction or systole. And the first sound is probably the result, 1, of the friction between the blood and the auriculo-ventricular orifices during the active diastole; 2, of the subsequent closure of the mitral and tricuspid valves; and 3, of the friction between the blood and the orifices of the aorta and pulmonary artery, during the systole; while, 4, the impulse, and also 5, the muscular contraction in the systole may contribute to this sound. The second sound, according to this view, is produced by the closure of the semilunar and sigmoid valves, after the systole.

These opinions have been urged with much ability by Dr. A. Stillé, in a work on General Pathology, and are now adopted by

Prof. Wood in his lectures at the University of Pennsylvania. They are certainly plausible; and, although they require the confirmation of further observations, before they can be positively admitted, they appear to us to offer the best explanation of all the phenomena of the heart's action that has been presented.

Dr. Bellingham's chapters on the Examination of the Heart in Disease, and on the Signs of Cardiac Disease, present a faithful and graphic picture of what is known on these subjects, and on many points his views are striking and original. We shall look with anxiety for the speedy appearance of Part Second.

Proceedings of the American Pharmaceutical Association, at the Annual Meeting held in Boston, August, 1853. pp. 48.

We have read these proceedings with much interest, and we feel confident that the action of this Association is destined to accomplish great good. It has taken the highest ground on the subject of quack medicines, as will be seen both from the resolutions adopted, and negatived.

Those adopted were—

"Resolved,—That the American Pharmaceutical Association believe that the use and sale of secret or quack medicines is wrong in principle, and is in practice attended with injurious effects to both the profession and the public at large, and believe it to be the duty of every conscientious druggist to discourage their use.

"Resolved,—That this Association earnestly recommend to our pharmaceutical brethren to discourage by every honorable means the use of these nostrums; to refrain from recommending them to their customers; not to use any means of bringing them into public notice; not to manufacture or to have manufactured any medicine the composition of which is not made public; and to use every opportunity of exposing the evils attending their use, and the false means which are employed to induce their consumption."

The resolution lost carries a no less pregnant negative.

"The following resolution, [embodying an opinion of the Committee on the Inspection of Drugs,] was offered, and after much discussion decided negatively:

"Resolved, That we believe the Drug Law was never designed to exclude foreign secret or quack medicines through the Custom House, nor do we believe this justifiable however *desirable*."

THE MEDICAL EXAMINER.

PHILADELPHIA, NOVEMBER, 1853.

YELLOW FEVER IN PHILADELPHIA.

It is with much pleasure that we announce to our readers that the Yellow or Malignant fever has entirely disappeared from our city; no new cases having occurred since the 7th of October. Nor is it with less satisfaction that we communicate the fact, that at no period of the year has our city enjoyed a greater degree of health than at the present time.

The whole number of cases of Malignant fever that have occurred since the 19th of July, as far as we have been able to collect them, have been one hundred and seventy. These embrace all reported to the Board of Health, together with a few others, that did not come under their notice. They include every variety of the disease, or those recognized in the nomenclature, as Yellow, Malignant, Malignant Bilious, Pernicious, Malignant Remittent, and Typhus Icterodes fevers.

One hundred and forty-seven of these cases may be distinctly traced to the immediate vicinity of the infected district, making South Street wharf the centre. Of the remainder it is uncertain where the fever was contracted.

The ratio of mortality has been very small, compared to the whole population of that section of the city where the disease prevailed; but, when calculated by the number of persons attacked, it has been proportionably large.

Out of 170 cases there were 128 deaths, equal to 75 per cent. or one death in every 1.42 hundreths.

This fatality, must be ascribed to the virulence of the atmospherical poison, and the character and habits of many of those who were exposed to its morbific influence. It must not, however, be entirely overlooked, that there have been other cases of fever in the infected locality, assuming a less malignant form, which being readily cured, were not considered by their medical attendants as suitable cases to report to the Board of Health. Had all such been included in the above estimate, they would have increased the number while they would have materially diminished the ratio of mortality, and at the same time have placed the success of the treatment, in a much more favorable aspect.

The locality of the fever has been very much circumscribed, its ravages having been confined to narrow limits. Union street on the north, Second street on the west, Queen street on the south, and the Delaware river on the east, may be set down as its boundaries, although we have the record of a few isolated cases, originating beyond these limits, between which and the infected locality, we could not trace any connexion.

During the interval between the date of the first case of Malignant Fever, July 19th, and the last, October 7th, including a period of eighty days, it is doubtful, when we compare the quarterly statistics of mortality, published in this number, with those of similar periods in preceding years, whether the health of the city in general has suffered any material deterioration. For instance, in 1852 the deaths for the quarter ending October 2nd, class Zymotic or Epidemic, were 980, among which fevers are included. This year they were 999, being an increase of only nineteen over those of the former, although malignant fever prevailed.

Notwithstanding, therefore, all the hue and cry among alarmists at home, and those envious of our reputation for health abroad, about the extent of the disease and its fearful ravages, we may safely assert, that the general health of Philadelphia as well as its increasing commercial interests, have not experienced any interruption.

Among all the cases of Malignant fever that have happened this season in our city, of which we have any record, there is not a single instance of its occurrence among the colored population. This fact is in accordance with a generally received observation, that the African race is much less susceptible to malarious influences than others.

Another circumstance worthy of record is, its non-contagiousness. This must be the uniform evidence of all who have had anything to do with the disease. Not an instance can be cited of its having reproduced itself. Many of the cases where the fever was contracted by a visit or a residence within the infected locality, were treated far beyond the limits, and in different parts of the city, without communicating the disease to others.

In the Pennsylvania Hospital 24 cases were treated, and in wards surrounded by those who were sick and convalescing from other diseases, and where there was continual intercourse with the patients, and not an individual in the house was attacked with the fever. The like immunity was observed at the Blockley hospital, where, had the disease possessed contagious qualities, it would have been very likely to have spread among the inmates.

In conclusion we would add, that we are more than ever convinced of the importance of sanitary measures in a large city. Our experience during the past few months has demonstrated their power and value. We are confident that judiciously administered sanitary operations are all that are required to avert the malignancy and fatality of epidemics. Cleanliness, pure air, and health go hand in hand. While filth, an impure atmosphere, and disease, are universally concomitants, one never being found without the other.

In a salubrious climate like that of Philadelphia, we should have no excuse for the spread of an epidemic. There do exist, it is true, as in all cities, where the laws of Hygiene have not been studied in the laying out of streets and in the erection of dwellings, numerous localizing causes, favorable to the outbreak and spread of epidemics, but by enforcing an early and energetic system of sanitary appliances, much may be done by the custodians of the health of the city, towards mitigating and arresting the spread of disease. W. J.

MEDICAL NEWS.

HOSPITAL APPOINTMENTS.—Dr. WILLARD PARKER has resigned the situation of Visiting Surgeon to the Bellevue Hospital, N. Y., and Dr. LEWIS A. SAYRE has been appointed to fill the vacancy.

Dr. WILLIAM HUNT has been appointed one of the Surgeons to the Hospital of the Protestant Episcopal Church of this city, to succeed Dr. W. B. PAGE, resigned; and Dr. DEACON has been appointed one of the Physicians to this Institution, to succeed Dr. F. G. SMITH, resigned.

Surgeon WILLIAM WHEELER, U. S. N., has been appointed Chief of the Bureau of Medicine and Surgery, vice Surgeon THOMAS HARRIS.

SAVANNAH MEDICAL COLLEGE.—This Institution will go into operation on the first Monday in November. The course of lectures will be delivered by R. D. Arnold, on the Theory and Practice of Medicine; Dr. G. M. Kollock, on Obstetrics and the Diseases of Women and Children; Dr. W. G. Bulloch, on the Principles and Practice of Surgery; Dr. C. W. West, on Medical Chemistry; Dr. H. L. Byrd, on Materia Medica and Therapeutics; Dr. E. H. Martin, on Physiology; Dr. J. G. Howard, on Anatomy; Dr. J. B. Read, Demonstator of Anatomy, on Pathological Anatomy.

Dr. TINSLEY, of Cuba, claims to have discovered, that "vaccine virus, after passing through a negro's system, is valueless for the white race."

COMPULSORY VACCINATION IN GREAT BRITAIN.—The new Act to extend and make compulsory the practice of vaccination, provides that parishes or unions, if need be, are, within six weeks of the passing of this Act, to be divided into districts, for the purpose of vaccination, and places are to be appointed for performance of the operation. The parents and guardians of children born after the 1st of August, 1853, are to have such children vaccinated within three or four months after birth, and the children are to be taken for the inspection of the medical officer on the eighth day after the operation, to ascertain the result of the same. Should the parents neglect to have the child vaccinated, they are liable to a penalty not exceeding twenty shillings.

OBITUARY.—Dr. W. COCHRAN, one of the oldest and most respected physicians of Louisville, Ky., died at Biloxi, Miss., on the 20th of August last.

DEATH OF Mr. BRANSBY B. COOPER.—Bransby Blake Cooper, Esq., F. R. S., Senior Surgeon to Guy's Hospital, and nephew to the late Sir Astley Cooper, died in London, on the 11th of August. Mr. Cooper was born September 2, 1792; he first served as assistant surgeon in the artillery, studied for some time at Edinburgh, and was eventually apprenticed to Sir Astley Cooper, his uncle, under whose fostering care, and by his own exertions and abilities, he gained the position of senior surgeon to one of the first institutions of the metropolis.

Mr. Cooper was the author of Lectures on Surgery, and was distinguished as a good writer and lecturer, a skilful surgeon and operator, and a laborious practitioner, until recently his exertions were necessarily relaxed by the onset and continuance of disease. When he first experienced the sensation of ulceration at the pharynx, he believed that he had swallowed some small bone, which had lacerated the parts, or was adhering to the tongue or pharynx. Several of Mr. Cooper's friends and colleagues were requested to inspect the throat, with a view to the discovery of the foreign body; but, as may be readily imagined, no extraneous substance was found, and the ulceration continued to make progress; the patient becoming at the same time emaciated, and considerably debilitated. As we stated above, Mr. Cooper continued, in spite of his sufferings, to pay occasional visits to Guy's where he was an object of great sympathy to his colleagues and the pupils, who had always

been treated by him in so kind and friendly a manner that they could not but feel much attachment for their respected friend and teacher. A small vessel (as proved by the autopsy) gave way in the posterior lingual region whilst Mr. Cooper was at the Athenæum Club, and he was almost instantly suffocated.

This eminent surgeon and amiable man was buried on the 25th Aug. when his remains were accompanied to the family vault, in St. Martin's Church, by a few relations, his colleagues at Guy's, and a limited number of students. All seemed to be impressed with great sympathy for the departed in paying this tribute of respect to the kind man, the valued teacher, and accomplished surgeon.

CIRCULAR OF INSTRUCTIONS TO SPECIAL EXAMINERS OF DRUGS.

To prevent the Importation of Adulterated Drugs and Medicines.

To Collectors and other Officers of the Customs, under the Act of 26th June, 1848.

TREASURY DEPARTMENT, June 4, 1853.

"It being represented to this Department that much embarrassment has been experienced by officers of the customs, at some of the ports of the United States, in reference to the provisions of the act of 26th June, 1848, 'to prevent the importation of adulterated and spurious drugs and medicines,' it is deemed expedient, with a view to avoid future difficulties arising from misconstruction of the law, and to secure uniformity of practice at the several ports in carrying out its provisions with precision and efficiency, to furnish you with the additional instructions which follow, explanatory and in modification of the circular instructions addressed to you by the department on the 7th July, 1848.

"To avoid the recurrence of a difference of opinion between the officers of the customs as to what particular articles of commerce should be considered drugs and medicines, and as such, be subject to special examination by the special examiner of drugs and medicines, it is thought proper to state that, in conformity with the evident spirit and intent of the law, it is required that all articles of merchandize used wholly or in part as medicines, and found described as such in the standard works specially referred to in the act, must be considered drugs and medicines, and that all invoices, therefore, of such articles, in whole or in part, must be submitted to the special examination of the special examiner of drugs and medicines, before they can be permitted to pass the custom house.

"In the examination on entry of any medicinal preparation, the said special examiner is to unite with the appraiser.

"With a view to afford a reliable guide to the examiner of drugs and medicines, as well as to the analytical chemist, on appeal, in ascertaining the admissibility of such articles under the provision of the law founded on their purity and strength, the following list is given of some of the principal articles, with the result of special tests agreeing with the standard referred to in the law, all of which articles are to be entitled to entry when ascertained by analysis to be composed as noted, viz:

"Aloes, when affording 80 per cent. of pure aloetic extractive.

"Assafœtida, when affording 50 per cent. of its peculiar bitter resin, and 8 per cent. of volatile oil.

"Cinchona Bark, when affording one per cent. of pure quinine, whether called Peruvian, Calisaya, Arica, Carthagena, Maracaibo, Santa Martha, Bogota, or under whatever name, or from whatever place; or

"Cinchona Bark, when affording 2 per cent. of the several alkaloids combined, as quinine, cinchonine, quinidine, aricine, &c., the bark of such strength being admissible as safe and proper for medicine and useful for chemical and manufacturing purposes.

Benzoin,	when affording	80	per cent.	of resin, or
"	"	12	"	of benzoic acid.
Colocynth,	"	12	"	of colocynthin.
Elaterium,	"	30	"	of elaterin.
Galbanum,	when affording	60	"	of resin.
"	"	10	"	of gum and
"	"	6	"	of volatile oil.
Gamboge,	"	70	"	of pure gamboge resin, and
"	"	20	"	of gum,
Guaiacum,	"	80	"	of pure guaiac resin,
Gum ammoniac	"	70	"	of resin and
"	"	18	"	of gum.

Jalap, when affording 11 per cent. of pure jalap resin, whether in root or powder.

Manna,	when affording	37	per cent.	of pure mannite.
Myrrh,	"	30	"	of pure myrrh resin, and
"	"	50	"	of gum.
Opium,	"	9	"	of pure morphine.
Rhubarb,	"	40	"	of soluble matter, whether in root or powder; none admissible but the articles known as East India, and Turkey or Russian rhubarb.

Sagapenum, 50 per cent. of resin.
" 30 per cent. of gum, and
Sagapenum 2 per cent. of volatile oil.
Scammony, 70 per cent. of pure scammony resin.
Senna, 28 per cent. of soluble matter.

"All medicinal leaves, flowers, barks, roots, extracts, &c., not herein

specified, must be imported, in perfect condition, and of as recent collection and preparation as practicable.

"All pharmaceutical and chemical preparations whether crystallized or otherwise, used in medicine, must be found, on examination, to be pure and of proper consistence and strength, as well as of perfect manufacture, conformably with the formulas contained in the standard authorities named in the act; and must in no instance contain over three per cent. of excess of moisture or water of crystallization.

"Essential or volatile oils, as well as expressed oils, used in medicine, must be pure, and conform to the standards of specific gravity noted and declared in the dispensatories mentioned in the act.

"'Patent or secret medicines,' are by law subject to the same examination, and disposition after examination, as other medical preparations, and cannot be permitted to pass the Custom House for consumption, but must be rejected and condemned, unless the special examiner be satisfied, after due investigation, that they are fit and safe to be used for medicinal purposes.

"The appeal from the report of the special examiner of drugs and medicines, provided for in the act, must be made by the owner or consignee within ten days after the said report; and in case of such appeal, the analysis made by the analytical chemist is expected to be full and in detail, setting forth clearly and accurately, the name, quantity, and quality of the several component parts of the article in question; to be reported to the collector under oath or affirmation.

"On such report being made, a copy of the same will be immediately furnished by the collector to the special examiner of drugs and medicines, who, if the report be in conflict with his return made to the collector, and he have cause to believe that the appeal and analytical examination have not been conducted in strict conformity with the law, may enter his protest in writing against the reception and adoption by the collector of such report and analysis, until a reasonable time be allowed for the preparation of his views in the case, and their submission to this department for its consideration.

JAMES GUTHRIE,
Secretary of the Treasury."

RECORD OF MEDICAL SCIENCE.

PATHOLOGY AND PRACTICE OF MEDICINE.

On the use of Proteine in Scrofula. By J. TAYLOR, ESQ., L. A. C. —It was asserted in the year 1849, in your "Answers to Correspondents," that there were no remedial properties in proteine. *Nous verrons.* The same might be said of "milk," and yet, in some cases, this simple agent affords us very conspicuous evidence of its therapeutic quality, as the following case will show :—

Mr. W ——, aged thirty-three, a tall and well proportioned man, with blue eyes and light hair, had always enjoyed excellent health; he had lately invested a considerable sum of money as a coach proprietor, and being desirous of turning the affair to the greatest possible advantage, became the driver of his own coach, took long journeys, and was very irregular in his habits; says his principal drink has been old ale, which he has not taken in inordinate quantity, and although not intemperate, had evidently been taxing his energies too heavily. He soon became the subject of dyspepsia, and amongst its various Protean forms was a constant vomiting of food after every meal, which persisted, in spite of appropriate and well-selected remedies, for more than a month, and so distressing was the irritability of the stomach, that not the smallest quantity of food could be retained for more than half an hour at a time. In this state he was compelled to relinquish his calling as coachman, having become emaciated and debilitated, and was attended by his physician and myself. He had no pain or tenderness in any part of the abdomen; no morbid appearance of the tongue; no headache or any preternatural heat of skin. There was craving for food, but no pain after taking it. Bowels costive; urinary secretion scanty, but of normal character. The persevering use of medicine for nearly three weeks appearing to be of no avail, it was determined to abandon the use of drugs altogether, and the patient was directed to take *a teaspoonful of milk* every hour and nothing else. The first day's trial of this remedy was so gratifying, that the patient exclaimed, "I know it will cure me, as I feel so comfortable after each dose." And so it did; the vomiting immediately ceased, and did not return; he continued his milk in gradually increased doses for more than a week, and then carefully resumed his usual diet. His recovery was rapid. So much for milk. Now for proteine.

John H ——, aged five years, a scrofulous boy, born of scrofulous parents, has had enlarged cervical and inguinal glands since the period of dentition; has now numerous ulcers in various parts of his body and limbs; is pale and emaciated, with defective appetite; has been taking iron and other tonics, with and without iodine in combination, during the last six weeks, without any evident improvement. Ordered, three grains of proteine, to be taken three times a day, in sugar and water. After the first week the boy was decidedly better in his general health,

looked more healthy, appetite improved considerably. In a month the mother remarked "she never saw such a change;" the boy was growing plump, many of the ulcers had healed, though a few fresh ones had appeared. The dose of proteine was increased to four grains three times a day, and the ulcers to be dressed with zinc ointment.

Third month.—All the ulcers have healed except four, and when a fresh one appears it is much smaller than usual. Increase the dose of proteine to five grains three times a day.

Fourth month.—Three or four recent small ulcers still open; the boy's health so much improved that his aunt, who had not seen him for six weeks, did not know him again, and his father observed that as the boy was so much better, it would be needless to incur any further expense, and requested the medicine might be discontinued. The proteine was consequently omitted for a fortnight, and the little patient's health was observed to decline. The parents therefore requested the medicine to be resumed, and his health rapidly improved again. The proteine was continued for about two months longer, in not more than five-grain doses, twice, and sometimes only once, a day, embracing altogether a period of somewhat more than six months, when my little patient was observed to be quite well. It may be remarked that this solitary case proves nothing. I could produce others, but the following may suffice:—

Jane B——, aged two years, an emaciated, strumous child, with tumid abdomen and enlarged cervical glands, and numerous ill-conditioned ulcers on the loins, nates, thighs, legs, and arms, has evinced symptoms of mesenteric disease ever since weaning, at nine months old; has been under the care of a surgeon for a month, and during that time has been gradually getting worse. Ordered zinc ointment, and occasionally a poultice of equal parts of linseed-meal and wheaten flour to be applied to the ulcerated parts; and to take proteine, two grains, soda exsiccata, one grain three times a day, in sugar and water.

First week.—The skin has become cleaner and more healthy, and some of the ulcers have healed; several that are now open display in a very remarkable manner the appearance of softened tubercles; the child looks more lively; bowels regular; appetite better; takes beef-tea twice a day, and milk night and morning. To have mutton for dinner.

Second week.—Greatly improved in every respect; has begun to run about again, which she has been incapable of doing for the last six weeks; nearly all the ulcers have healed; abdomen smaller; has gained flesh; appetite excellent; bowels regular; sleeps well. Ordered the proteine to be continued in doses of three grains, soda exsiccata, one grain twice a day. The mother did not bring her again, but I saw her on passing the house a month afterwards, running about in excellent health and spirits.—*London Lancet.*

Chloroform in Obstruction of the Bowels from Spasms. By J. D. CAIN, M.D.—Every physician meets, in the course of his practice, with cases of obstruction of the intestines, which has come gradually or suddenly, generally from some cause of irritation existing in them. The obstruction in these cases consists of a spasmodic contraction of a portion, or of

portions of the intestines, generally the small. The plan I formerly pursued was, to cease all attempts at forcing a passage by means of cathartics, if one or two brisk cathartics failed, and to resort to opium freely, enemata of warm water, melted lard or butter, sweet oil, etc., the warm bath, fomentations of the abdomen, and other means of producing relaxation. For more than two years I have used chloroform, as a more powerful agent than opium, and its preparations, and as more certain in relaxing the muscular system. The chloroform administered in greater or less inhalation, soon produces a greater or less degree of resolution, and taking advantage of the relaxation thus effected, I give enemata, either stimulating, mucilaginous, or oily, which in a short time bring away fæcal matter. The inhalation may be repeated as often as in the judgment of the physician the case demands.

Chloroform possesses the immense advantage over opium, of relieving effectually and promptly the pain, and in not leaving the bowels in a constricted state, the sedative effect soon passing off.

Seven cases have thus been treated by me with highly satisfactory results. In one case only have I experienced any difficulty in inducing the requisite degree of relaxation of the bowels. The subject of this case was very slightly suspectible to its influence; but the pain was completely relieved by frequent inhalations, and the obstruction gradually overcome.—*Southern Med. and Surg. Journal.*

Treatment of Lead Poisoning by Iodide of Potassium.—The number of cases of poisoning by lead, received at the New York hospital during the past season, has been quite large. Some of them have been traced to the influence of lead paint as a cause, either in painters or in those who have remained in rooms newly painted; but, in many cases, the mode in which the poison was introduced into the system could not be detected. In cases of constipation, strychnia in doses of one-sixteenth of a grain, three times a day, has been given, and continued until the bowels were opened, or until the specific effects of the drug were produced. Other means have been used to assist its action; and evacuations from the bowels have been produced in some cases by croton oil, and, in other cases, by turpentine enemeta, when croton oil has failed. The strychnia is thought to obviate the tendency to costiveness which follows the use of drastic cathartics. One patient was permanently cured of the constipation by strychnia alone. The blue line about the gums has been recognized in every instance; and in one case there was a patch of deep blue color, of the size of a shilling piece, on the membrane lining the lower lip. All the cases of this disease, after the urgent symptoms are relieved, are now treated with the iodide of potassium, in doses of five grains three times a day, gradually increasing to ten grains, according to the plan proposed by M. Melsens, the results of whose researches have been repeatedly verified by finding lead in the urine after the exhibition of this remedy, when none could be detected in the urine of the same individual before taking it.—*N. Y. Medical Times, October*, 1853.

Upon the Pian or Yaws, a Disease of Tropical Climates. By M. GUYON.—This eruptive disease, called, from the raspberry-like color of the spots, frambæsia, appears to be contagious, and transmissible from generation to generation. Its transmissibility by inoculation is proved by the fact, that it has been conveyed from the tropical regions of America to Africa, doubtless by infected negroes landing from ships trading between the two countries. In Algeria, the native physicians consider it to be a sort of syphilis, and treat it as such. They direct, for forty days, a strict system of diet, under which the disease disappears, but it returns as soon as the patient reverts to his usual habits. From this fact, M. Guyon concludes, that the apparent cure is but a phenomenon connected with the general emaciation and disappearance of the soft parts.

In the Antilles, the treatment of yaws is entrusted to negroes, the same class of men who profess to cure serpent bites. They administer decoction of sarsaparilla and sulphate of ammonia. Some physicians, it is said, have tried with good effect mercurials combined with tisanes of guaiacum and sarsaparilla. The usual duration of the disease is four to five months. We require further investigations respecting it.—*London Medical Times.*

Spontaneous Gangrene in Glucosuria. By M. MARCHAL, of Calvi.—Two years ago the author observed a case of spontaneous gangrene in a diabetic patient, who first lost the little toe, and, continuing to void sugar in the urine, eventually succumbed with gangrene of nearly the entire foot. Since this observation, made fifteen years ago, Dr. Landouzy, of Rheims, communicated a case of gangrene of both legs in a diabetic patient. A third case has occurred recently.

M. Marchal was called into consultation, near Paris, to see a patient suffering from two gangrenous spots upon the dorsal region. One, very large, and surrounded by phlegmonous redness and œdema, extended along the outer part of the left thigh. The patient, upon inquiry, stated that, for many years, he had drunk much, and had voided large quantities of urine. The urine, examined by M. Duroy, an experienced chemist, yielded much sugar. As in one of the preceding cases, the patient had suffered frequently from boils in various parts of the body, M. Marchal purposes carrying on his investigations further at a future period, but thought the fact of sufficient importance to lay before the Society.—*Ibid, from L' Union Medicale.*

MATERIA MEDICA AND THERAPEUTICS.

Antiperiodic Properties of the Humulus Lupulus. By W. Y. GADBERRY, M.D., of Benton, Miss.—As a substitute for quinine is a great desideratum on account of its enhanced market value, I have thought a brief notice of the antiperiodic virtues of the humulus lupulus, or common hop, might not be unacceptable to the profession. I am not aware that any author has ascribed to this plant any such virtue. Having

used it for nearly two years I can confidently state that its antiperiodic properties equal, if they do not exceed, those of any other article of the materia medica with which we are acquainted, quinine alone excepted; and, indeed, in my experience, it has often succeeded in arresting intermittents after that remedy had failed. It is harmless in its effects, and will often be borne by patients who cannot take quinine.

Every practitioner is aware of the advantage of combining an anodyne with antiperiodics; and by reference to the works on materia medica, the reader will see that hops possess these properties. When administered alone the infusion is preferable, and should be made of double the strength prescribed by the Dispensatory. One ounce infused in a pint of boiling water may be taken during the interval, or a larger quantity if necessary. If the secretions are properly regulated, and there exists no enlargement of the spleen, it will rarely fail to effect a cure of tertian or quartan ague. It has not succeeded so well in the cases of quotidian type as in those of more protracted intervals. The tincture was used alone in three cases successfully. The following combination is worthy a trial by all who desire a safe and efficient substitute for quinine:

℞. Tinct. hops, tinct. Peruvian bark, aa ℥ iv.
Pulv. black pepper, ℥ ss.

To be given in doses of half an ounce every two hours during the interval.

My limited experience will not justify an opinion upon the antiperiodic virtue of lupuline, not having used it except in combination of quinine. Patients to whom I have administered this combination prefer it to quinine alone, on account of its soothing effect upon the nervous system. The hop is indigenous to this country, growing abundantly in almost every garden; and if I have not over estimated its antiperiodic virtue, it will prove a blessing to the poor, in whose welfare the physician should always feel a special interest.— *West. Journ. Med. and Surg.*

New Anti-Periodics.—Dr. Holton recommends *Prairie Dock—Parthenium Integrifolium*—as a remedy for periodic fever. He considers a decoction of two ounces of the dried tops of the plant, the equivalent of twenty grains of quinine. This is placing a higher value upon its remedial powers than has been accorded to any other substitute for cinchona, or quinine, that has been discovered. It proved successful in thirty successive cases, some of which were severe; and without any unpleasant effect upon the nervous system. If these observations are confirmed and established by further experience, the remedy will be of immense value. The root of the *Yellow Jessamine—Gelseminum Sempervirens*—has also been recommended as a valuable substitute for quinine. It is said to be of this root that the "*electric febrifuge*" is made, which is now used pretty extensively in the South, as a nostrum. The efficacy of this remedy is certified to by the usual number of *respectable* names, including, of course, dignitaries of the church; and we have seen it—the Jessamine—highly extolled in several medical journals.—In all the accounts we have seen, however, it has been used in conjunction with such large quantities of quinine, as to preclude the possibility

of forming a correct judgment of its anti-periodic efficacy; and the same is true of the electric febrifuge. Whether the two remedies be identical or not, they are both powerfully narcotic, and it is probable their remedial virtues are due to this quality. But we have no reason to suppose them superior to the stramonium, and other narcotics which have been in use as febrifuges from time immemorial. A species of *Verbena*, we believe the *V. verticifolia*, has been successfully used as an anti-periodic in the neighborhood of this city. Several families which have been annoyed by intermittent fever, declare that they have found this herb commonly called vervain, or vervine—so efficacious as to supersede the use of quinine. They use the green herb itself, in decoction.—*Memphis Medical Recorder.*

A Case of Poisoning by Ruta Graveolens. By George F. Cooper, M. D., Savannah, Geo.—Isaac, a negro man, æt. 35, of good constitution and habits, had dysentery for six days, which was apparently confined to the rectum and for which he received mild treatment, without, however, any decided benefit. The disease seemed gradually to abate, and on Saturday, 14th Aug., '52, 7. A. M., he was entirely clear of any febrile excitement and only suffered slight tenesmus upon going to stool. He was so nearly recovered that I did not expect to visit him again. It seems he became dissatisfied with his slow rate of improvement and determined to expedite it if possible. He procured a handful of Rue, and after contusing it, he added about ʒiv of brandy, which he obtained from his owner, and after expressing it, took three drinks in pretty quick succession. It is proper to state he went after the brandy himself—forty or fifty yards—and his master regarding him as so nearly well, without hesitation let him have it. Violent symptoms were developed in the course of an hour, and I was sent for, but, being absent, did not reach him until about two o'clock, P.M., when I found him in the following condition: nausea and vomiting, violent abdominal pains and tenesmus, with frequent thin, bloody dejections, abdomen tender and considerably distended, troublesome irritation of the neck of the bladder giving rise to frequent and painful efforts at micturition. The fever was not of a high grade, skin being somewhat above the normal temperature and perspirable. The thirst was not very urgent, tongue clear, his pulse was from 90 to 95 and very irregular, his countenance expressive of much anxiety and he very restless, respiration but little hurried. Venesection was performed to the amount of 15 or 20 oz., or until the circulation was impressed. Large doses of opium—from grs. ij to grs. iij. in conjunction with the same quantity of Hydrarg. C. Creta and Acet. Plumb. were ordered every 2 or 3 hours. Mustard Cataplasms to the abdomen and diluent drinks. His abdomen was also cupped. Aug. 15. Not at all improved, except that he does not suffer so much pain as on yesterday. Dejections from his bowels continue undiminished in frequency and same in character and are exceedingly offensive. In the afternoon as there seemed to be no great degree of general excitement, at least not enough to forbid it, and as he appeared in no wise better, I gave him gr. ½ Nitrat. Argent. combined with gr. 1 Opium every 2 or 3 hours.

Continuing the former powders at prolonged intervals, 6 by 8 emplast. cantharid. was ordered upon the abdomen at intervals. 16th.—I found this morning that his stools were not so frequent nor offensive, their character otherwise remained apparently the same. Pulse still very irregular, from 90 to 95, with rather a better volume than before; in other respects in statu quo. In the afternoon, as he appeared partially narcotized, the above treatment was withheld and he placed upon Turpentine emulsion and Sol. Chlorid. Sod. He now became so annoyed with irritable stomach and real convulsive hiccough that it was with great difficulty that he could retain any article of diet or medicine, the presence of the slightest amount of either gave rise to the latter in a most distressing form. Nothing done had any good effect, he continued to sink and died on the 19th. I would remark, I have never seen an instance where the stools were as frequent, and in no case have I observed the powers of nature to resist so long such a strain. For the first two or three days two vessels had to be used, one could not be emptied and returned with sufficient dispatch for his use. It is to be regretted that an autopsy was not made. The case, I presume will speak for itself, and its cause I apprehend will not be questioned. This article (Rue) has been used to procure abortion, and the effects as recorded by other observers seem to quadrate with those laid down above.—*Nashville Journal of Medicine and Surgery.*

White or Imperial Rhubarb. By Dr. G. Walpers.—In all works on Pharmacology there occurs a somewhat vague account of a very superior kind of rhubarb, said to be collected for the sole and particular use of the Imperial Court of St. Petersburgh, and distinguished by the name of *White* or *Imperial Rhubarb* (*Radix Rhei alba seu imperialis.*) It is described as a rhubarb root in which the white portion so far predominates that only a few red streaks are perceptible upon the surface of a transverse section. No one, however, is from personal knowledge acquainted with this species of rhubarb. In order to put an end to these doubts, I some time since addressed a letter to Mr. Buchner, Chief Apothecary to the Imperial Court, begging him for a small specimen of this "*Imperial Rhubarb*" for my pharmacological collection, or should the communication of this precious drug be inadmissible, that I might at least have an authentic description of it. Mr. Buchner replied to this request with the utmost promptitude, informing me that, after having instituted the most careful inquiries, it appeared that no such species of rhubarb had at any time been imported for the Imperial family; that it had never occurred in commerce; and, finally, that in neither any public or private collection in St. Petersburgh was there to be found a specimen of this (consequently mythical) root.—*Bonplandia*, for March 15, 1858.

[It was the Russian traveller, Pallas, who first drew attention to the so-called *White Rhubarb.* We extract from his works the passage relating to it: "J'ai vu pendant mon sejour à Kiakta des petits morceaux de rhubarbe blancs comme du lait. Elle est douce au goût, et a les mêmes propriétés que celle de la meilleure qualité. L'apothecaire se

proposoit de trier tous ces morceaux, et de les envoyer separément á Petersburg pour la pharmacie de la Cour.'—*Voyages de M. P. S. Pallas, en différentes, Provinces de l'Empire de Russie, et dans l'Asie Septentrionale, traduits de l' Allemand.* Paris, 4to, 1793, tome iv. p. 219.—Ed. *N. Y. Ph. Journ.*]

Poisoning by Sir William Burnett's Disinfecting Fluid. By Richard Hassall, M. D.—The first case I have to relate is one of unusual interest. In the first place, the instances of poisoning by chloride of zinc which have been placed on record are very few; in the second place, the train of nervous symptoms observed was of a most remarkable character; in the third, the efficacy of prompt treatment is illustrated in a very striking manner.

In the systematic writing of our leading toxicologists no mention is made of chloride of zinc as a poisonous substance; the only salt of zinc referred to as possessing any interest in this respect is the sulphate. Even Dr. Taylor, in his elaborate work on "Poisons," bestows upon the chloride but the most cursory notice, and the subject is evidently suggested to him rather by the methodical arrangement of his matter than from any precise information as to its toxicological properties.

Dr. Stretton has recorded two cases of poisoning by chloride of zinc. In one, twelve grains of the salt were taken; in the other, two hundred grains dissolved in a wineglass full of water. Both the patients recovered. In the *Medico-Chirurgical Transactions* for 1850, a most interesting case, which terminated fatally, is detailed by Dr. Letheby; and it is to the same paper that we must look for whatever accurate knowledge we possess of the poisonous properties of this substance.

In May, 1851, a man who a week previously had taken some of Burnett's fluid by mistake for gin became a patient at the Metropolitan Free Hospital. His first symptoms were described to have been severe pains in the stomach, distressing vomiting, frothing at the mouth, and a livid countenance. He appears to have got over the immediate effects of the poison, without any treatment whatever. After a week there was great emaciation, weakness, pain in the stomach, and constant sickness. Under treatment, which does not seem to have been guided by any precise indications, he gradually recovered. A few other cases are casually reported, but too concisely to permit of any definite conclusions.

That instances of poisoning by chloride of zinc should be rare is a matter of surprise, when we consider how common is the use of Sir William Burnett's fluid; and when attention is called to the circumstance which led to the accident I am about to relate, this surprise will be very much increased. A gentleman was very much in the habit of having recourse to a draught of Murray's fluid magnesia for the relief of occasional sickness. One day, being about to sit down to dinner, sickness supervening, he called for his usual draught. About three ounces by measure of a liquid was brought to him, and rapidly swallowed. It turned out that a bottle of Sir William Burnett's fluid was in the house for disinfecting purposes; out of this bottle my patient had been

supplied. On comparing the two bottles, it was observed that their size and shape were closely similar—the resemblance even extended to the labels; and in short the general aspect of the two was so nearly identical as readily to favor a mistake. Sir James Murray's fluid magnesia has been in general repute for many years; and it is very much to be regretted that in introducing Sir W. Burnett's fluid care was not taken to adopt some distinctive character for the bottles. The risk of mistaking a dangerous poison for a harmless medicament ought surely to be avoided.

On the 6th of November, 1852, at about six P. M., three ounces by measure—probably four ounces three drachms, troy, by weight—of Sir Wm. Burnett's disinfecting fluid were hastily swallowed, as I have already mentioned. As this took place just before dinner, it may be inferred that the stomach was empty. This circumstance it is important not to pass over, since it must have operated in a two-fold manner to augment the danger of the case. The irritant and even corrosive fluid was brought into immediate contact with the coats of the stomach, and the system would be in the most favorable condition for absorption.

The first symptom experienced was a sense of constriction in the fauces, and then a hot, burning sensation in the stomach marked the arrival of the fluid in that organ. There was no pain in the mouth, or even in the œsophagus, nor was there any appearance of corrosion about the lips or mouth. This I account for by the suddenness with which the draught was gulphed down, leaving no time for any local effect. Almost immediately after the accident, the case was also seen by Mr. Hancock, Dr. Seaton, and my brother, Dr. Arthur Hassall. Within two minutes a quantity of water was swallowed, and vomiting was excited by thrusting the finger down the fauces. Ten minutes were consumed in getting ready a quantity of eggs and milk; when these were procured they were liberally administered. Vomiting was renewed by irritating the fauces, but it is remarkable that it did not set in spontaneously for nearly an hour. After this time the mixture was thrown off instantly after being taken, by the most violent action; it returned as a solid, coagulated mass; one portion of which was so large and so firm as almost to cause suffocation. This treatment was kept up throughout the night, and until two P. M. of the following day, the patient vomiting continuously, and rejecting the milk and eggs in the same curdled state. In the evening blood appeared in the vomited matter, a quantity of mucus, and a portion of mucous membrane measuring an inch and a quarter square. Throughout the third day the vomited matter was still streaked with blood. There was no action of the bowels until the third day, when they acted spontaneously; the stool was of a black, coffee-ground appearance, and entirely wanting the odor of fæces. The urine presented nothing unusual.

From the beginning the patient experienced the most distressing headache, and utter inability to sleep, and violent "clawing" pain in the stomach. This "clawing" in the stomach persisted in great severity for a long time, and even now (March, 1853) is felt when the stomach is empty. On this (the third) day, the pain described was felt in-

tensely, but there was no tenderness on pressure; the pulse was 90, and had no remarkable character. Leeches were applied to the epigastrium, and followed by poultices. This gave no relief; indeed this was only obtained by taking bland, warm things, such as gruel, arrow root, and milk. Opium brought no ease. There was an excessive nervous derangement and prostration, tremor of the limbs, and a great disposition to pick the bedclothes; a feeling of sinking, and an urgent craving for food; the tongue was intensely red.

It was quite a fortnight before anything but black stools appeared; then they were pale, clayey, dry, and crumbling, showing no evidence of bile. The bowels being, moreover, sluggish, an occasional pill of blue-pill and rhubarb, and a draught of senna and tartrate of soda, were taken. These gave no pain or inconvenience; the stools gradually improved, but it was six weeks before the proper proportion of bile appeared, and they assumed a natural appearance. Throughout this time there was no natural appetite, but a morbid craving for something wherewith to allay the irritation of the stomach. From the third day the skin assumed a ghastly bluish-green tint; this lasted for a long time, and has not even yet quite disappeared. Great emaciation was observed; the skin looked as if it was stretched tightly over the bones of the face and hands.

I have now to detail the curious train of nervous symptoms which attended this case. The prostration, muscular tremors, wakefulness, were early observed. The sense of smell underwent a singular perversion; every kind of roast meat, if ever so slightly burnt, roasted coffee, tea, &c., had to my patient an intolerable putrid odor; roast mutton was especially offensive. Scents and perfumes prepared with alcohol gave an odor resembling that of hemlock; on the other hand, putrid and fæcal matter had no apparent odor at all.

The perversion of taste was not less remarkable; and the points of resemblance between the phenomena of taste and smell, served to illustrate the relation existing between these senses. Roast meats and crusts of bread were intolerable; and most foods had a burnt taste, especially *raw oysters*, which resembled burnt flour, and felt quite dry, clinging to the mouth. Things naturally insipid, such as the crumb of bread and potato, gave a more natural flavor and were better relished. Acids did not taste acid, nor alkalies alkaline, and to him quinine was not bitter.

These peculiarities continued strongly marked for some time, and the senses of smell and taste are still imperfect.

I have now to return to the history of the case. A gradual improvement was made for the first two months, the urgency of the symptoms described having subsided. Too early a return to accustomed avocations, while the strength was still low and the nervous system had not yet recovered its equilibrium, brought on an attack of illness of extreme severity. The patient was seized with symptoms resembling the onset of influenza; there was excessive nervous prostration, hyperæsthesia, and great irritability, which passed into a condition resembling tetanus; no noise could be borne; the slightest shock caused a start; if the bedclothes touched the toes, tremors approaching convulsions ensued. For five

nights there was no sleep. There was a terrible pain in the right side of the head, which would last for hours; when this subsided, nausea and retching ensued; the pulse rose to 120 or 130. There was some febrile movement; the skin was alternately very dry and moist. During this secondary attack the liver again evinced a sluggishness of action, and the urine, which hitherto had been normal in quantity, became excessive; on one occasion seven pints were passed in five hours. In the first instance blue-pill and ipecacuanha and salines were ordered. For fourteen days the patient was confined to his bed, when the intensity of the symptoms had subsided, he still complained of the gnawing of the stomach. Dr. Wilson was consulted, and magnesia, with bismuth and hydrocyanic acid, were prescribed, and attended with some relief. A gradual improvement has again taken place, but the natural hue of the skin has not quite returned; the taste and smell are still impaired; the pain in the stomach is occasionally felt, and the general strength is reduced.

I will not lengthen this communication by entering upon a minute analysis of the symptoms observed, but I must beg to arrest attention to some points of especial interest. The poisonous action of chloride of zinc—that is, in that state of concentration in which it is found in Burnett's fluid—is of a double character: it has a local corrosive action, and a general toxical effect, the result of absorption.

I have already endeavored to account for the absence of any appearance of corrosive action in the present case about the lips or mouth by the rapidity of swallowing. In Dr. Letheby's case, however, corrosion was marked; "the lips were swollen; their inner surface and the lining membrane of the mouth presented an opaque white appearance;" and "when the child attempted to swallow water the greater part returned by the nostrils." The local action of the poison was also marked by the "hard and leathery" consistence of the stomach after death; but although in the case before us the mouth and œsophagus escaped, I cannot doubt but the stomach suffered; the vomiting of blood, the shred of mucous membrane rejected, and the passage of blood by stool indicate some sign of local injury; and this was the more likely to occur from the stomach being empty. Had food been present the chemical action of the poison would have been spent upon it, and the coats of the stomach would have been more or less protected. One circumstance in connexion with this local action deserves especial notice on account of its bearing on the treatment of similar cases of poisoning. It might, *prima facie*, be concluded, that the salt would speedily be decomposed, and removed in altered combinations by a moderate supply of albuminous matter and vomiting; but this does not appear to be the case. An enormous quantity of eggs and milk was passed through the stomach, and yet for many hours it was constantly rejected, strongly coagulated from the action of the poison. Dr. Letheby also detected a considerable quantity of chloride of zinc in the tissues of the stomach in his case, although vomiting had taken place. From this consideration, then, fortified by the successful issue of the case, I would strongly urge the necessity not only of a copious but a long-continued supply of albuminous matters. I think it the more important to refer to this point, because the treatment of

poisoning by chloride of zinc is still unsettled or misunderstood. In one of Dr. Stretton's cases, soap-suds were administered, and in the case referred to at the Metropolitan Free Hospital. The physician who had charge of it, in reporting the history, recommended that soap or carbonate of potash or soda should be given in order to throw down carbonate of zinc. This practice is doubtful. The carbonate of zinc, although insoluble, might still be injurious; certainly calomel, carbonate of lead, sulphate of baryta, and other substances, cannot be said to be inert. The constitutional effects of the poison in this case are well marked; one of the earliest manifestations of the absorption of the poison into the blood is remarkable. The ghastly, bluish-green color of the skin can be attributed to no other cause than to the action of the poisonous compound (probably more especially of the chlorine) on the blood. It is unnecessary to refer at length to the nervous symptoms already detailed. It must be difficult to analyze the constitutional symptoms, and to determine how much is to be attributed to the hydrochloric acid and how much to the zinc. The experiments, however, of Orfila, Blake and Letheby, seem to prove that the nervous symptoms are dependent upon the zinc. Dr. Letheby is of opinion that the poison enacts a distinct and specific action on the motor and organic system of nerves. The excessive prostration, the strange perversion of the senses of smell and taste, the tremors of the limbs, and the tendency to tetanoid convulsions, observed by myself, would appear to corroborate this opinion.

As the recorded cases of poisoning by chloride of zinc show that this substance does not generally cause death in consequence of its primary corrosive action, it is a point of especial interest to consider by what means the elimination of the salt from the system can be promoted, and its secondary effects obviated or mitigated. The three great depurating sources are the liver, the kidney, and the skin; but it requires some caution before determining upon stimulating these organs to action. As in the case of poisoning by arsenic, chloride of zinc appears strongly to irritate, if not to inflame, the kidneys. In Dr. Letheby's case, the kidneys were greatly congested; in my case, the kidneys did not appear in the first instance to be much affected. The effect upon the liver was more marked; the arrest of its action was no doubt one reason why the poison was so long delayed in the system. Possibly more advantage might have been taken of the favorable condition of the kidneys. Are we to regard the excessive diuresis which marked the second attack as an effort of Nature to get rid of the poison remaining in the system? The peculiar character of the symptoms attending that attack clearly show that the system was still laboring under its effects. Before putting an increased strain upon kidneys, however, we must take care to ascertain that they are free from any congestion or inflammation. If they should be in this condition, then we must turn to the liver, and especially the intestines. Saline purgatives, with jalap, might be employed with advantage; and at the same time every effort should be made to promote the free action of the skin; warm baths and friction would be of most material assistance. M. Bonvier, in treating cases of zinc-poisoning among workmen engaged in oxide of

zinc manufactories, detected zinc in the washings of the skin. A similar fact has been long known with reference to lead-poisoning.

I cannot quit this case without once more insisting upon the propriety of so altering the appearance of the bottles in which Burnett's Fluid is sold as to obviate the possibility of its being again taken by mistake for fluid magnesia.—*Lancet.*

OBSTETRICS.

Uva Ursi, a substitute for Ergot. By E. G. HARRIS, M.D., of Fayette, Alabama.—I wish to call the attention of the medical profession to Uva Ursi, as a substitute for Ergot, in producing uterine contraction. Whether it will produce all the effects, or answer all the indications of that drug, I am not able to say; but I do know, that it will produce considerable uterine contraction when given during labor. Since December last, I have given it in five cases, in all of which it acted more efficiently than ergot. In three of these cases the pains had ceased entirely, from exhaustion of nervous energy. A strong decoction of uva ursi was given every ten minutes, and in thirty minutes the pains had increased considerably, and in from one to one and a half hours, the delivery was effected and the placenta expelled, the uterus contracting well, and no untoward symptoms taking place. In the other two cases the pains had not ceased, but were fast doing so. I gave them bountifully to two of my *new parturients*—one of them was delivered in fifty minutes, the placenta following in less than five; the other in an hour and twenty minutes, the placenta in ten. In all these cases the head occupied the superior strait at the time I commenced giving the medicine, in consequence, no doubt, of inefficient uterine contraction. The os uteri was in good condition in all the cases. Directly after the exhibition of the uva ursi, the pains would become strong and propulsive, lasting about the ordinary length of time; then going completely off, leaving the patient free from pain, except that produced by pressure upon the soft parts; the placenta soon followed; the uterus contracted well, and no hemorrhage more than ordinary. There was little or no tonic contraction until after the expulsion of the placenta, when it was complete.

I am aware these five cases are not sufficient to establish its reputation as a therapeutic agent in labor, yet the result of the past encourages me to give it a further trial; and should its use in the future prove as successful in the hands of my professional brethren as it has in mine, I shall feel amply rewarded for any trouble I may have been at in bringing it to their notice. I was first induced to use it by being called to a case where the pains had ceased; and having no ergot, and knowing the effect it had on the kidneys and bladder, I gave it as above described. I prefer it to ergot, for the following reasons:

1st. Because there is no danger in it; you may give it *ad libitum*. It is well known that ergot often produces nausea and vomiting, and sometimes slow weak pulse, cold extremities, dilatation of the pupils, &c.

2d. Although it increases the propulsive efforts of the uterus, yet it does not produce that tonic contraction which is so painful to the mother,

and at times so hazardous to the life of the child, until after the delivery is affected: this is generally far otherwise with ergot. More than once have I seen a young and healthy mother give birth to a well developed but dead infant—not from the poison being absorbed by the mother, and through the circulation destroying the child, but *alone* by the powerful tonic contraction of the uterus compressing the umbilical cord, arresting the circulation, &c. Often have I seen the placenta retained for hours, and in two cases for a day and night after it had been entirely detached from the uterus, by the firm and unyielding grasp of that organ—*all brought about by the free administration of ergot.*

My plan for giving it is as follows:

℞. Uva ursi, a good article, 2 oz.
Boiling water, 1 pint.

Pour the water on the leaves in a pitcher or bowl, stir it till it becomes cool enough to drink, and give one-fourth as hot as it can be drank every ten or fifteen minutes, until it has the desired effect. Attention should always be paid to the condition of the os uteri, dimensions of the pelvis, &c.—*Southern Med. and Surg. Journal.*

Anteflexion of the Uterus as a normal condition prior to Pregnancy. By M. BOULARD.—A few years since, a very animated discussion took place at the Academie de Médecine, upon the subject of engorgement of the uterus. M. Velpeau was one of those who maintained that anteflexions of the uterus are often mistaken for engorgements, while other speakers declared anteflexion itself to be a very rare occurrence. M. Boulard, engaged in searching for examples of the deviation for Velpeau, was at once struck by the frequency of its occurrence in young subjects, while in older ones he scarcely ever met with a case, without, from the examination of the other organs, ascertaining that the subject of it had never been pregnant. After in this way collecting a great number of uteri from the dead-house, M. Boulard resolved to study the point during the development of the organ, and found that the uterus is almost always anteflexed in the fœtus. He has continued to pursue the investigation from that period; and the present paper is founded upon the examination of 27 adult female subjects who had never borne children, 19 young girls from two to thirteen, and 57 full-timed fœtuses. In 98 of these anteflexion has been found, and to such a point is the body bent upon the neck, that it is not possible to prevent its regaining the same position immediately after the attempt at replacing it has been made. Since these observations have been made, the author has sought every opportunity of verifying them in the living subject; but he has only had ten opportunities of examining the position of the uterus in the virgin, and in all of these the anteflexion existed.

M. Boulard accounts for this disposition having been overlooked by anatomists, by the fact that the bodies of women who have borne one or more children are those which are usually brought for dissection; and the organ is examined only after it has undergone this physiological change, or under the influence of the relaxed state of the tissues after death. When anteflexion has been noted, it has been considered as an

abnormal and diseased condition, and regarded as a cause of suffering which was due really to some morbid condition which had become accidentally associated with it.—*Brit. and For. Med. Chir Rev. from Rev. Med. Chir.*, xiii. 341.

On the Effects of Menstruation on the Milk of Nurses. By MM. BECQUEREL & VERNOIS.—Upon this effect, which the occurrence of menstruation exerts in women who are suckling, there is discrepancy of opinion among authors, the majority, however, with the public at large, believing in its deteriorating influence. So great is the difficulty in obtaining true statements upon this point, that among the great number of hired nurses in Paris, the authors have only been able to examine the condition of the milk in three women while actually menstruating. In these the density of the fluid was found slightly diminished, as was the proportion of sugar, and the proportion of water was sensibly so. The solid parts were notably increased, especially the caseine. The authors cannot believe that such changes in composition can induce any mischief beyond some temporary derangement in the digestive organs, and even this might be prevented by causing the child to suck less, and letting it drink a little sugared water, to replace the sugar and water lost during menstruation.

In the discussion that followed reading the paper, M. Roger observed, that while attached to the Office for Nurses, he had paid considerable attention to this point, and that he had arrived at the following conclusions:—If the menses reappear easily, without pain or derangement of the nurse's health, while her milk is under 12 or 15 months old, and the quantity of blood lost is normal and moderate, the quantity of milk does not become diminished, or its qualities altered, and the child does not suffer from its use. If, however, the menses are too abundant or too frequent, the milk may diminish in quantity or disappear. The same effect is also produced, though more slowly, in some days or weeks, when the menses are prolonged for a week, so that the loss is considerable. The milk will much more certainly dry up if the menses reappear at an advanced period of lactation—this being then the signal of the imperfection and approaching termination of the secretion.

When the milk becomes thus diminished, it rarely exhibits the physical characters of the poor milk; but by its density, whiteness, and the excess in number and size of its globules, it more approaches in character and richness cow's milk. When the menstrual epochs reappear with difficulty, and are attended with pain, indigestion, diarrhœa, &c., or are preceded or followed by leucorrhœa, the child may suffer symptoms due to indigestion induced by the altered characters of the milk—the alteration of the milk chiefly consisting in increase in the number and size of the globules. These influences are, however, only temporary, and the milk soon recovers its normal character. The ailments which the child hence suffers are only temporary, and have been greatly exaggerated. —*Ibid, from L' Union Medicale*, No. 70.

SURGERY.

Upon Fluids which stop Hæmorrhage. By SEDILLOT.

Eau de Pagliari, consisting of Tinct. Benzoes, ʒviii.
Alum, lb. i.
Water, lb. x.

This preparation, which has a pale straw color, and is transparent, possesses an extraordinary power of coagulating blood.

Eau de Rabel, consisting of Acid. sulphur., 100 parts.
Alcohol, 300 parts.

The acid should be poured upon the alcohol slowly.

Baume de Compignt has not yet been analysed, but appears to contain an empyreumatic oil.

Eau de Hepp is a modification of the Eau de Pagliari.—*London Med. Times.*

Artificial Membrana Tympani.

[To the Editor of the Medical Times and Gazette.]

SIR,—Allow me, through the medium of your Journal, to suggest to those medical men who are using the artificial membrana tympani, that when it is not in use it should be kept in water. By this means it retains its form, and it is kept quite soft. As at present manufactured by Weiss, the artificial membrana tympani is made of vulcanized India-rubber, not much thicker than ordinary writing paper; I find this material preferable to gutta percha, which is apt to wrinkle.

I am, &c., JOSEPH TOYNBEE.

Treatment of Aneurism by injecting into the sac a concentrated solution of the Perchloride of Iron.—At a meeting of the London Medical Society, in the early part of April, Mr. Gay read the account of a case (of which the following is an abstract) lately communicated to the Societé de Chirurgie, by M. Larrey, and forwarded to this country by Dr. Costello. In the month of January, Dr. Pravaz of Lyons, made known to the Academie des Sciences a new method of effecting the coagulation of blood, by mixing with it a cencentrated solution of the per-chloride of iron; and, at the same time, suggested the employment of this agent for the cure of aneurism. M. Delongchamps, an army surgeon in the same town, followed up the suggestion, and with the happiest results, as the following narrative will show:—

A blacksmith of Le Maus, æt. 26, met with a blow over the left eyebrow. This was followed by an aneurism of the supra-orbital branch of the ophthalmic artery, which gradually increased in size, until it had attained that of a pigeon's egg. Continuous pressure was made over the tumor, by means of a pad and spring, for twenty-five days and nights, but without any benefit; and as the patient was unwilling to submit to the process of electro-puncture, and other remedies did not appear to be suitable to the case, M. Delongchamps decided on trying the proposal of Dr. Pravaz.

On the 4th February, an oblique puncture was accordingly made through the walls of the sac, and whilst compression was made on the

artery above and below, a few drops of the solution were injected into it, by means of a small glass syringe with a fine point. A few drops of florid blood followed the withdrawal of the syringe, but without jet; a few more drops of the solution were then injected, and it became at once evident that these had produced the desired effect; for the blood in that portion of the sac into which the nozzle of the syringe had been introduced became rapidly firm, and pulsation ceased. In the remaining portion of the sac, however, no such change took place, which arose from the fact, that a firm plug of coagulum had formed in the orifice of the syringe during the operation, which no force on the piston could dislodge, and prevented the escape of a quantity of the solution sufficient to coagulate the whole of the blood within the sac. The patient suffered no pain, nor did he desist from his ordinary work. On the 6th of February, as the success of former operations had only been partial, ten or twelve drops more were injected, the nozzel of the syringe having been previously well greased, in order to prevent the formation of a plug, as on the former occasion. A sharp burning pain followed, and the contents of the sac could distinctly be felt to be undergoing a process of solidification. Not a drop of blood escaped this time on the withdrawal of the syringe, and pulsation ceased entirely. On the 7th, the patient suffered some throbbing pain and restlessness, and the tumor became swollen and hot. These symptoms, however, subsided quickly under the use of evaporating lotions, etc.; so that, on the 8th, the patient could resume his work. A slight oozing of pus through the last puncture took place a few days afterwards, and with this a subsidence of the tumor. By the 15th of March, the cure was so far advanced, that its situation could scarcely be recognized.

Mr. Gay expressed his opinion, that the treatment of aneurism by the method referred to was deserving of every attention; but that at present its employment should be confined to smaller aneurisms. The affinity of the perchloride of iron for fibrin is so strong, that its coagulation commences as soon as they come into mutual contact; and so firm is the clot that ensues, that no fear need be entertained of any shreds being washed away by the circulating current. As a styptic, this and other experiments that have been made, prove that it is invaluable.—*Edinburg Monthly Journal.*

ANATOMY AND PHYSIOLOGY.

Upon the difference of Temperature between Venous and Arterial Blood. By G. V. Liebig.—Former investigations upon this subject have led to conflicting results. Most of the older observers, such as Haller, Crawford, Kramer, Scudamore, &c., having declared, that the arterial blood (in the left cavities of the heart) is warmer than the venous blood of the right cavities by 1°; while A. Cooper, Coleman, Mayer, Autenrieth, etc., either pronounce the temperature of both kinds of blood equal, or give to the venous blood an excess of temperature over the arterial of 0·5°. The author proceeds, in his attempts to explain these differences, to inquire, whether the higher temperature be found in the blood flowing from the lungs, or in that from the capillaries, and he reverts to some of his former observations upon "muscular respiration."

The experiments were conducted both upon living and recently-killed animals. That death might be caused quickly, and without loss of blood, the medulla oblongata was severed in some instances, and narcotin was administered in others. The thermometer was introduced, either by the jugular vein or the carotid artery, to the requisite depth of the heart; or it was inserted into the crural vein, or the vena cava abdominalis. Respiration was prolonged after death, when necessary. The experiments were performed upon dogs, and with every possible precaution to avoid errors,

The results were—1. That the temperature of the blood in the right cavities of the heart exceeds that of the left cavities by 0·05°; 2. That the blood flowing into the heart by the vena cava descendens is cooler than that from the vena cava ascendens (probably because the blood which the former vessel contains comes from parts which presents to the atmosphere a very great extent of surface in which a process of cooling takes place.)

In the venous system, there go on changes of temperature corresponding with the respiratory act. In the vena cava superior it was remarked that at the end of each inspiration the temperature of the blood rose; between inspiration and expiration it attained its maximum; towards the end of expiration it fell; and was at its lowest point after expiration. When animals breathe, or rather expire, shortly and quickly, and then inspire deeply, the variations of temperature are greater than usual. When the thermometer is in the right auricle, the highest degree corresponds with inspiration, and the lowest with the beginning of expiration. When the breathing is very short and hurried, these changes of temperature become diminished, or even cease altogether. In the vena cava abdominalis the same phenomena were not observed; in the vena iliaca they were reversed, the maximum occurring after expiration, and the minimum after inspiration.

The author then remarks upon the mechanical influence exerted by the respiratory movements upon the circulation in veins. The enlargement of the thoracic, and the diminution of the abdominal cavities, coincident with inspiration, cause the blood of the vena cava ascendens to flow into the right auricle, during and especially at the end of inspiration. The contents of the vena cava descendens are less than those of the vena cava ascendens, and they are cleared out at the beginning of inspiration. During expiration the abdominal cavity is widened, and the vena cava abdominalis gains both in space and contents. Towards the end of inspiration, the auricle will therefore be filled by the warm blood of the vena cava abdominalis; and at this moment is observed the highest degree of variation in the heart's temperature. In expiration the blood streams into the auricle chiefly from the vena cava descendens, and then is remarked the minimum of temperature. As regards differences of temperature in different parts of the same system, the author found the blood of the vena cava sup. 0.16°, and that of the auricle 0.20°. Between the auricle, where the blood from two vessels of different temperature is not completely mixed, and the ventricle, the difference amounted to 0.1—30.20°.

In the arterial system there are no variations dependent upon the movements of respiration, or they are very slight, amounting to 0·01—0.06°, and connected with the changes in the right cavities of the heart, and the cooling of the blood in its passage from the lungs.

In dead animals, the temperature of the blood of the right ventricle exceeds that of the left by 0·16°. In two experiments, however, the temperature was found the same in both cavities. The temperature of the blood of the vena cava abdominalis was once, upon opening the chest, found 1·72° higher than that of the thoracic portion of the carotid during life. The same observations were repeated in several experiments. The blood of the vena cava abdominalis, which comes from the capillaries of the lower extremities, and of some of the abdominal viscera, is the warmest blood in the body, even in animals where the heart has been emptied by bleeding, and to this point the author attaches great importance.

It would be desirable to know the amount of cooling which the blood undergoes in its passage through the lungs; but the subject is fraught with difficulty. The fact, however, if established, is most important, inasmuch as the source of animal heat has been referred by many to the organs of respiration. As regards the warmth of the blood in the vena cava abdominalis, it must be remembered, that the vessel lies imbedded in soft, highly organised parts, where, under all circumstances, heat is retained for a longer time than in other parts of the body; and perhaps this fact will explain the cause of the warmth of blood in that vessel as satisfactorily as any theory of changes going on in the capillary system. —*Med. Times, from Schmidt's Jahrb.*, 1853.

The Determination of Urea. By Professor LIEBIG.—The new method proposed by Liebig has the advantage of simultaneously determining the amount of chlorine and of urea. It is as follows: 100 grammes of mercury carefully purified from bismuth and lead, are dissolved in pure nitric acid; the salt is evaporated to a syrup like consistence, and then enough water is added to reach accurately to 1400 cubic centimetres. Every 100 cubic centimetres contains 7.140 grammes of mercury. If this solution be added to a solution of pure urea, a *snow-white* precipitate falls, which is a compound of urea and oxide of mercury (U+4HgO.) When the urea is all precipitated, and when consequently, nitrate of mercury is the solution, a *yellow* precipitate, hydrated oxide is thrown down by the addition of a little carbonate of soda to a drop of the urea. In order to determine the exact moment when the yellow precipitate occurs, the solution of the nitrate of mercury is of course added drop by drop from a burette, and from time to time a drop of the urine is taken and tested with the soda. One cubic centimetre of the solution corresponds to 10 milligrammes of urea, and from the quantity used, the amount of urea is calculated.

Although nitrate of mercury will thus precipitate urea, the bichloride will not do so, and on this fact is founded the determination of the chlorine. If the solution of urea be not pure, but mixed with chloride

of sodium, no precipitate at first occurs with the nitrate of mercury, because sublimate is formed; if the nitrate continue to be added, then at last, the chloride being exhausted, the mercury combines with urea, as in the pure solution. Therefore the quantity of solution used before the white precipitate appears, shows the amount of chlorine which must have combined with the mercury first of all. A cubic centimetre of the mercurial solution corresponds to 10 milligrammes of chloride of sodium.

In testing urine the phosphoric and sulphuric acids are first precipitated with barytic water; and after filtration, the urine is weakly acidified with nitric acid.

Although both the chlorine and the urea *may* be determined by the *same* quantity of urine, it is advisable to use two portions, one for the chlorine and one for the urea. The quantity of nitrate used for the chlorine alone in the first specimen, can be deducted from that used for the urea and chlorine together in the second, and the remainder gives, of course, the quantity which has been used for the urea.—*Brit. and For. Med.-Chir. Review*, from *Annalen d. Chem. und Pharm.*, Band lxxxv. 1853.

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THE

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AND

RECORD OF MEDICAL SCIENCE.

NEW SERIES.—NO. CVIII.—DECEMBER, 1853.

ORIGINAL COMMUNICATIONS.

On the Diseases and Injuries of Seamen. By G. R. B. Horner, M. D., Surgeon U. S. Navy, Philadelphia.

Diseases of the Respiratory Organs.

Notwithstanding the strict examination of seamen before their admission on board ship, there are no class of persons who suffer more from the above complaints. This may be ascribed mainly to their great exposure to every vicissitude of weather, their often being wet with rain or sea water, neglecting or not being able to change their clothes, and when chilled not having it in their power to warm themselves by any artificial means. When on watch, too, they are very much habituated to lying down on the decks, and even beneath the sails, reflecting down upon them the strongest currents of air. Likewise, seamen when sleeping below decks, and the air presses down through the hatches and into the ports, are very liable to take cold. This, moreover, affects them from its constant application, and being accompanied always with more or less dampness, either in the external air, or in that of their vessels. These likewise shift like the weather, and so often pass from hot to frigid climates that their crews suffer thereby as they would from exposure to vicissitudes of

weather, and when remaining in any fixed place. Owing to these causes seamen are liable to every species of disease which effects the lungs, their air-pasages and investing membranes. From neglect and want of proper medical attendance, many of them are prone to be severely and chronically diseased; organic changes necessarily follow, and cures are more difficult of attainment. Upon the inspection of the diseases which occurred in three men-of-war—two frigates and one ship of the line—of which I was surgeon, I have found that in one of the former 265 cases of catarrh, alone, took place. In the other frigate there were 106 within 18 months, the period I was on board her; and in the Delaware, the ship of the line referred to, which had a crew of 840 persons, 232 cases occurred, although she spent more than a year between the tropics before she went to the Mediterranean. During the entire cruise of two and a half years, 23 of her crew had phthisis pulmonalis, of whom twelve died; eight on the Brazil station, and four after she left. But one of the former died in a merchant vessel before she got clear of the coast, and one of the latter either at our naval hospital, Port Mahon, or else in returning home. Of the crew of the United States, the first frigate referred to, ten had phthisis, of whom eight died, four on board, and four at the above hospital under charge of another surgeon than myself; but in the Savannah, the second frigate, merely three cases of the disease happened, of which only one was fatal, that of a supernumerary who came on board of her in California for treatment. The comparative exemption of her crew from the disease is ascribed to the great care in selecting from it, and sending on shore at Boston, before she sailed, all persons who were believed to be of unsound constitution. The great reduction in the number of her crew on her arrival in the above country, also served to render the number of cases proportionally less, and we must likewise ascribe the small amount of these and other cases of pulmonic diseases to the avoidance of wet decks, keeping the vessel continually of moderate temperature by the use of stoves in her, and the receiving ship, Franklin, to which the crew were transferred while the Savannah was in the dry-dock undergoing repairs. But the cold was so intense, the air so humid, when the wind blew from the north-east and east, that eleven of them were affected with pleurisy, between the 12th

January and the 4th of March, 1849, the period included within the time of her arrival off and departure from Boston. No deaths took place among these cases, and a very small number of other pulmonic ones, except phthisis, in the above and other vessels terminated fatally. Among these cases was the one of pneumonia, in the Brandywine, followed by mortification of the lungs, and another accompanying a violent remittent fever, off the coast of Syria, and in another frigate. From catarrh no death directly happened, but one of the fatal cases of phthisis was traced to it, and one of hypertrophy of the heart in the Delaware which ended in like manner, two months after the patient contracted a catarrh in the form of influenza, which attacked the crew in the first week of September, 1843, while she was at Naples. More than sixty of them were affected at the same time with the complaint to such a degree as to be rendered unfit for duty. Many others were affected moderately and were not taken on the sick list. What was most remarkable respecting the disease, was, its prevalence during warm and fair weather, without any great change of temperature, Fahrenheit's thermometer having been at 76°, the day before the influenza appeared; at 73° on the same day the three first cases were admitted, and only at 71° upon the 10th of September, or three days afterwards. The thermometer fell a fraction on the day the disease appeared, and at the same time the wind blew freshly from off shore, and the Appenines, and raised by its great dryness the hygrometer to a most extraordinary height. As no rain had recently fallen, a whitish impalpable dust was blown to the ship, covered her rigging, and caused the sailors to think it was sulphur ejected from Mount Vesuvius, although the wind was north-east, and the latter bore almost south-east. They likewise concluded that the dust being sulphur must have occasioned the epidemic.

On board the United States the atmospheric phenomena were different. The air had been damp and chilly, the wind was variable; the thermometer was at the freezing point the day we entered the gulf of Smyrna, and snow covered the adjacent mountains. But on the 26th of January, 1837, the day before she left that port, and three weeks from the former period, the thermometer was at sixty-one degrees. The number and violence of these cases in this vessel corresponded with the extremes in

temperature. One hundred and twenty-six of the men were affected with catarrh in such a severe form as to have been taken on the sick list between the seventeenth of January, when the complaint began to assume an epidemic form, and the 12th of February, when it ceased to be so, and the vessel arrived at Port Mahon.

On the 27th of January ninety men, including officers, were on the list, and almost the whole number had the complaint, some moderately, others violently, and accompanied with high fever, acute pains in the head, chest and limbs, and delirium. Among the latter was an officer liable to hereditary insanity, and who has been a maniac ever since. His mind had been previously wavering between sanity and insanity, and lost its balance when catarrhal fever attacked him. In these cases, as well as those of the same kind in the Delaware, venesection was employed: leeches were applied to the temples, cups and blisters to the chest, when it was much affected; pectorals, anodynes and diaphoretics were prescribed; but in a vast majority of patients I effected a cure in a few days, often in a single one, by first giving an ounce of epsom salts and one or two grains of tartar-emetic in ℥viij of water at several doses; then by administering a solution of the latter medicine in the dose of an eighth of a grain in simple water, but generally, as being most palatable and soothing to the throat, when flavored with sugar, gum arabic and extract of liquorice. This pectoral was given every hour, or at intervals of three or four hours, and was aided by some hot herb tea, as that of catnip, marsh-mallow and horehound. Balm and eupatorium are also freely used by me in such cases, and for producing copious perspiration the latter is unrivalled by any of the other herbs mentioned. To promote the diaphoretic effects of all of them, the feet were well bathed in hot water; and as this also produced a revulsive effect from the brain, it composed this and caused the sick to sleep soundly. The bath, moreover, helped to relieve coryza, which was often very profuse, from the inflammation of the mucous membrane of the nostrils being very intense; but in these cases, the direct application of steam or hot water to them several times a day was most effectual, from its inducing a profuse secretion of mucus and disgorging the capillary vessels. A few grains of super-acetate of lead or sul-

phate of zinc render the hot water still more effectual. The steam of vinegar or brandy is likewise beneficial, but I prefer that of water. This, moreover, I have found best to relieve otitis, which sometimes attends catarrh, and for its cure may be applied by means of a hot brick wrapped in a damp towel.

Several cases of pleurisy and one of pneumonia occurred in the United States at the same time with the influenza, and were cured by copious venesection, cups and blisters to the thorax, and other remedies enumerated. In the treatment of the last named affection, the spiritus mindereri and neutral mixture with tartar emetic dissolved in them, and the nitrous powders containing this medicine, in the quantity of an eighth of a grain, with one grain of calomel in each powder, produce a happy effect. The three first named articles promote sweating and expectoration, open the bowels and reduce the pulse, while the last named decreases the plastic property of the blood and causes the absorption of any effusion which may have occurred in the lungs, or within and upon their pleural coat and that of the ribs. By observing the above practice with some variations, none of the above cases of pleurisy and pneumonia ended fatally, and no others, except two private ones to which I was called in the last stage, and which had been unattended by any physician. One was that of a marble mason, who persisted during a rainy, chilly day in po lishing one of the columns to the portico of the Naval Asylum A violent inflammation of the lungs, bladder, and almost every tissue of his body supervened; and having been allowed to rage unchecked, every affected part became so injected with red blood as to appear to have been done by artificial means. The mucous coat of the bladder was the most peculiar, from being of a scarlet hue, covered with dark red spots.

The other case was that of a citizen of the island of Milo, south of Greece, and to whom I was called during a transitory visit to the town, in April, 1833, while surgeon to the John Adams. Although the island contained some thousands of inhabitants, there was not then a single physician among them. The patient had therefore received no proper medical attention, was in the last struggle for existence, and gasping loudly for breath in a low bed and at the back of a dark room. A crowd of women, wrapped in white muslin mantles and dresses, stood around the

bed, and holding flaming torches in their hands, were mournfully looking on at the dying man. He laid, apparently unconscious of their presence, upon his back, making imperfect inspirations and expirations; his face was sunken, pallid, cadaverous, his pulse was rapid and bounding, but sinking. There was not the least hope of his recovery, yet I prescribed, through an interpreter, what seemed calculated to comfort him, and had to hurry away before the awfully tragic scene had terminated, lest darkness should overtake me before the landing place and ship were reached. Her distance from the shore, and this from the town, prevented me from making any attempt at a post-mortem examination, and had it been convenient to make one, the friends of the deceased would probably have refused it. From the symptoms, too, the morbid changes, I judge, would have been similar to those just described, from this man having had the disease also unchecked. The changes found in the dissection of the seaman, mentioned as having died of hypertrophy of the heart succeeding catarrh, were the following: The whole organ was much enlarged, and especially its left ventricles, the parietes were thickened, the auricular ventricular openings expanded, the chordæ tendinæ and columnæ carnæ elongated and thickened, the aorta was expanded and gritty, the pericardium contained several ounces of serum, and the left ventricle was filled with dark blood. The right lung adhered to the ribs; its bronchia were expanded; it contained some tubercles and purulent matter, and within the pleura were about two pounds of serum. The liver was indurated, of a greyish red color like porphyry, and much engorged. The gall bladder was small and filled with dark bile; the pancreas indurated and enlarged; the mucous coat of the stomach congested and somewhat softened.

From these morbid alterations, his age, which was fifty, his habits as a sailor, and his not having complained before attacked with catarrh, of any cardiac, or other disorder, to my knowledge, the following conclusions were drawn: that by long continued indulgence in ardent spirits, the liver, pancreas and stomach had been affected, and the two first indurated insensibly; that the circulation of the blood having been partially interrupted, the heart then commenced to enlarge, and the influenza afterwards having seized him, that organ, the right lung and pleura became

actively inflamed. This was very clearly indicated by the great fulness, frequency and strength of his pulse, great dyspnœa, pain in the chest and other symptoms, which caused me to bleed him copiously twice within the first three days after he was taken on the sick list, to bleed him moderately once towards the close of his life, and to administer the tincture of digitalis, squills, antimonials, tr. assafœtida, extract of stramomium, and other anodynes, besides making local applications over the diseased parts.

In the treatment of phthisis, of the tubercular or other kinds, the above remedies with a variety of others were employed, but the result as stated has already shewn that they often failed in my hands as they have done in those of many more physicians. Relief was certainly obtained by using these remedies, the patients were at least made more comfortable, but in all climates consumption had its full quota of victims, in spite of cod liver oil and every other specific recommended. But in some cases I was gratified by success. Two of them were, that of a marine who had been completely prostrated by phthisis and its accompanying chronic diarrhœa, and the other that of a seaman just returned from a cruise in the East Indies ; but his case was not one of tubercular phthisis, and was thought to have been induced chiefly by an adhesion of the upper convex surface of the liver to the diaphragm and inflammation extending from it into the right lung. An abscess formed in this, a large quantity of thick whitish pus was discharged day after day, and finally became so tinged with green, as to permit no doubt that bile was being effused from the liver through an ulcerated passage extending through the diaphragm into an adhering portion of the lung. This patient, John Ward, was and is now, a pensioner in the Naval Asylum, of which I was surgeon when he was treated. He was cured chiefly by means of tincture of digitalis, gum ammoniac and other expectorants, blisters to the chest, tartar emetic ointment as a dressing, and pills of blue mass. The other case was cured, at least sufficiently for him to resume his duties, by the internal use of a solution of sulphate of zinc and sulphate of morphine, in the proportion of one grain of the former to $\frac{1}{8}$ of the latter 3 or 4 times a day in a half ounce of water, and by injecting the same compound into the rectum to check the diarrhœa.

While I was at the Naval Asylum, another uncommon instance of phthisis occurred in the person of Wm. Williams, a one legged pensioner, of intemperate habits. He was under treatment for six months, had taken various pectorals, composed of tinc. of tolu, gum ammoniac, acetate and sulphate of morphine, had worn a tartar emetic plaster, and for a long period had his wasting frame supported by bitter infusions and quinine mixture. In the mean while he expectorated a large quantity of pus, and discharged almost as much from an abscess over the anterior face of the right ribs. Upon death having occurred, an autopsia was made to ascertain what connection existed between the internal and external abscess, and to discover what other morbid changes existed. Four of the true ribs, the third, fourth, fifth, sixth and seventh, were found to have formed the base of the external abscess, and beneath the third and fourth ones was the abscess in the lung. No direct communication was discovered between the two abscesses, but it was thought that the trace of it had been removed by the knife and saw used in dissection. The cartilages were ossified, and one was separated from its rib by caries. This was plainly owing to the pulmonic abscess behind it having had its contents brought into contact with the bone and cartilage. The external abscess having discharged its fluid contents through the fistulous orifice which had so long existed, contained only some cheesy matter. The right lung had a small quantity of water effused in it, and the left lung had much contracted in size, was filled with tubercles of a blackish grey color, adhered closely to the ribs and cartilages, so that the pleura costalis and pulmonalis were merged into one and undistinguishable, and the lung in its antero-posterior diameter was merely about one inch and a half in diameter. The liver was very small and blanched at its lower edge, but the right lobe was elongated downwards into a flap three inches long, and its structure otherwise normal.

In conclusion I will state concerning this patient, that he had an attack of hæmoptysis a year before he was treated for phthisis, and was nine days under my care for the former.

Six other patients at the Asylum besides those spoken of had phthisis during my last term of service there, and one died

of it there before it was opened for the reception of pensioners, and while I was assistant to our late distinguished chief of the bureau of medicine, Dr. Thomas Harris. The latter patient was a seaman who, while dying, nobly offered, without any request or persuasion, to let me "do with his body after death as was thought fit." Accordingly it was examined. His lungs were found filled with tubercles, but the right one, as I have seen in most dissections, was worst diseased, containing several vomicæ, and being totally disorganized. Of the six other cases three ended in death, and one within twelve days after it was treated. This case was an obscure one. The patient was 65 years old; came on the list, and was treated for a cough and diarrhœa of great obstinacy, which seemed the chief cause of death. He was much prostrated, and in conjunction with an expectorant and opiates taken by mouth and used as enemata had to be prescribed, pills of sulphate of quinine, and an infusion of pulv. cinchonæ, colombo, ginger and orange peel. For cough, and shortness of breath of an asthmatic kind, he was also given a tartar emetic plaster to be worn over the chest. The infusion having appeared to purge, was combined with laudanum, and xx. drops were taken in each dose. Opiate enemata were prescribed pro re nata, the diarrhœa having become worse. It was impossible by these or other medicines to sustain him; the stools became watery, his excretions of all kinds offensive, and he expectorated some greenish pus ten days before his decease. Upon examining him, both lungs were found adhering to the ribs, filled with tubercles, collapsed and shrivelled. The right lung, however, as expected, was worst, for it contained many vomicæ of small size, and adhered to the ribs by strong tendinous bands. The small intestines and stomach were inflamed chronically, and the latter had its mucous coat atrophied, of a dark red color, and deprived of its cryptæ and folds. The liver was blanched and indurated, and had its acini indistinct. But the most unnatural phenomena were the thickening and softening of the parietes of the heart, and the perfect adhesion of this to the pericardium, no interstice having been left between them. No instance of this kind had ever before fallen under my notice, nor has another been since seen.

Another pensioner, named Wilhelm, a foreigner, had long

been gate keeper at the Asylum, and was remarkable for his florid complexion, slender and agile form. He came on the list with a slimy diarrhœa and inflamed eyes. His tongue was thickly furred, his abdomen sore to the touch, and he had had a cough for some time; but little notice was taken of it until he had been on the list for three weeks and expectorated a quantity of glairy, greenish mucus. The stethoscope was then applied, and detected a mucous rattle. His bowels up to that time had attracted chief attention, and had been restricted by first giving a dose of pulv. rad. rhei, magnesia and laudanum, and afterwards several sorts of pills, besides some grains of kino and tinc. cinchona compos. as he had been a free drinker. The pills were of ipecac. and opium at first, then of these articles and blue mass, and last of the former, calomel and essence of peppermint. Two days after his admission he complained of being very weak, and was directed two doses a day of a quinine mixture and a pill at night. He likewise was given an infusion of cinchona, colombo and ginger, with tincture of opium, a brown mixture for his cough, some opiate enemata, pills of quinine, opium, and essence of peppermint; had a Burgundy plaster put on his chest, and a flannel bandage around his abdomen. Nothing availed; he died twenty-five days after taken in charge.

Autopsia.—Two ounces of serum were in the pericardium, the lungs adhered in every part to the ribs; when cut into resembled greyish granite, were filled with tubercles beginning to suppurate, but the right lung was most diseased. The stomach was distended with flatus, its mucous coat was deficient, being about the thickness of brown paper, was softened, and easily scraped off with a knife handle; the folds and villi were almost invisible, and slight inflammation existed in the cardiac orifice. Three ulcers were seen in the jejunum within a foot of one another, and completely perforating its coats; the peritoneal coat of all the small intestines was inflamed, slightly in most parts, but greatly in some from the effusion of fæces into the cavity of the peritoneum. The liver was enlarged, indurated, nearly white, and deprived of its acini; the spleen was indurated, but weighed only about three ounces, was merely two and a half inches long, one thick, and one and a half broad, and contained no grumous blood, The bladder was contracted and blanched, its coats were thick-

ened, the left kidney was enlarged, of a light red color, and nearly as hard as dried beef, and the right kidney, though of natural size, was of the same consistence.

Such were the effects of disease on this poor old sailor, aggravated by a long-continued abuse of ardent spirits—the greatest of all curses to his fraternity, and destroying more of them than become victims to the tempests or the billows of the ocean.

Case of Precocious Development of the Sexual System in a Female Child. By CHARLES WILSON, M. D., of New Berlin, Union Co., Pa.

In Nov. 1850, while residing at Selin's Grove, in this county, I was called several miles into the country, at night, to see a case of croup. After the little sufferer was relieved and I was about to depart, the mother of the child requested me to prescribe for a daughter who had been in ill health for several weeks, on account of a suppression of the menses. I replied that as it depended altogether upon the state or condition of health her daughter was in, it would be necessary for me to see her before I could prescribe an appropriate remedy. She then stated that her daughter was not yet six years old, and was so bashful that I could get nothing out of her, nor would she remain in my presence. On my naturally expressing much surprise at what she related, and in answer to my earnest questions, the mother gave me the following history of her daughter's case:

Mary Ann G—— was born in March, 1845. There was nothing remarkable observed in the child at birth, but the unusual size of the mammæ, which were "as large as hen's eggs;" they increased rapidly, and at the fifth month had attained the size of a girl at puberty. The mother at this time noticed the child's diaper stained with blood, and upon examination, ascertained that it proceeded from the genitals. This discharge continued two days. In five months subsequently,—the tenth month of her age,—this discharge reappeared and continued for three days. After this it came on every three months, until she was four years old, when it did not appear at the accustomed time. The child fell into bad health and had the usual ailings of females laboring under a suppression. After using various remedies, she

was again regular at the seventh month from the first period, when she immediately regained her former good health. Her menses, however, have since then appeared only every seven months; they continue, and have done so for several years, five days. Now, however, her time to be regulated has passed for some weeks without a show, and she again suffers bad health, for which I am consulted.

On expressing an anxious desire to the father to see and examine the child, he gratified me by leading the way to her chamber, where she lay on her bed asleep, and completely exposed her. She was about the ordinary stature of children of her age, but unusually heavy set and fat. Her breasts were about the size of a *well developed* adult virgin's, of which her father said she used to feel very proud, and take boastful airs on herself with her little playmates, but latterly has become shy and avoids any notice of or allusion to them by others. The pudendum was thinly covered with black hair, and altogether she presented the appearance of a girl after the age of puberty.

In answer to my interrogatory, whether she ever manifested any amorous predilections for the other sex, the father replied that he had observed none.

I prescribed for this anomalous little creature, but heard nothing more of her, as her parents shortly afterwards removed to another and more distant residence.

CLINICAL REPORTS.

Pennsylvania College, Ninth below Locust street. Service of Professor GILBERT.

Reported by W. H. GOBRECHT, M. D.

Case of Extensive Enchondroma of the inferior maxilla, removed by resection of the body of the bone from the symphysis to the angle on the right side.

The patient, Moses Christopher, aged thirty years, colored, seaman by occupation, generally residing in this city and enjoying good health, was brought before the class by Professor Gilbert on Oct. 12th, 1853, when it was shown that a large tumor

projected from the right side of his face, commencing immediately below the malar bone and extending into the neck, whilst horizontally it occupied all the space intervening between the symphysis of the chin and the lobe of the ear. The outlines of the tumour were distinct, terminating abruptly, without adhesion to the integument or any tissue or organ bounding it. The cavity of the mouth was found filled by the tumor which was traversed by a deep sulcus that received the row of teeth projecting from the right superior maxilla, around which the tumor seemed to have moulded itself. Of the two lobes thus formed, one extending upward and outward greatly distended the cheek, and the other passing upward and inward almost completely filled the whole palatine arch of the mouth when it was closed. The tongue was pushed back, so as to be seen with difficulty, and the os hyoides and larynx were also pressed toward the pharynx by the extension of the tumor in that direction.

The external appearance of the tumor is here shown in a cut by Gihon, from a Daguerreotype by Laughlin.

This entire adventitious mass seemed to consist of an expansion of, or an interstitial growth within, the right half of the inferior maxilla, terminating abruptly at the symphysis and angle

of the bone. It is hard and osseous in all its periphery; within the mouth, it is covered by the natural tissues which remain free from abrasion or ulceration. The lower teeth of this side are covered by and involved in the tumor.

Of the numerous cases of tumor operated for already in the presence of the class this session, no one belongs to the division of which this is a most interesting specimen.

The patient stated that he observed the commencement of this tumor, about four years ago, he then had pain in a molar tooth of that side, since which time it has gradually increased without pain or other annoyance, except such as resulted from the inconvenience of bulk. At present mastication (on the sound side) is exceedingly difficult, and deglutition, respiration and articulation, are materially interfered with. The molar teeth of the superior maxilla, have occasionally abraded the mucous membrane occupying the cleft of the tumor, from which hemorrhage occurred, but by ordinary care it soon cicatrized.

Prof. Gilbert then remarked that from the history of the case and the physical signs presented, there could be no doubt of the character of the tumor, viz., that it is *benign* or *analogous*, and entirely free from all malignancy, belonging to the division of osseous tumors which has been recently denominated Enchondroma.

As the lower jaw is frequently the seat of malignant tumor or osteocephaloma, it is of the utmost importance to arrive at a correct diagnosis before any operation is decided upon in a case of this kind, since, in the latter form of disease, operative procedures do not afford permanent relief, but rather hasten a fatal result.

In this case the tumor commenced its growth after the individual had attained adult age; its increase has been slow, gradual, uniform and painless; it is firm and unyielding to pressure, and presents an even convex surface; it has formed no attachment with surrounding tissues, nor do we observe any disorder of the general system; there are no ulcerating points upon its surface, all abrasion from the action of the upper teeth having cicatrized. Dr. Gilbert has therefore no hesitation in deciding upon the propriety of an operation, and will expect it to be

quite as successful as that performed here last year, in the case of Mr. Reilly, involving the removal of a smaller portion of the lower jaw, or that of Mrs. E. McB——, of N. J., in whose case about a year ago the entire superior maxilla was removed, both precisely similar in their histological characters. The operation though formidable and involving risk to life, is nevertheless justified by the impending fatal result if left to itself, by mechanical closure of the larynx and œsophagus.

On Wednesday, Oct. 19th, at 1 P. M., the operation of resection was performed, in the Surgical Amphitheatre of the Pennsylvania Medical College, in the presence of the class, and a number of medical gentlemen, by Prof. Gilbert, assisted by Prof. Allen, Dr. Gobrecht, and Dr. W. K. Gilbert.

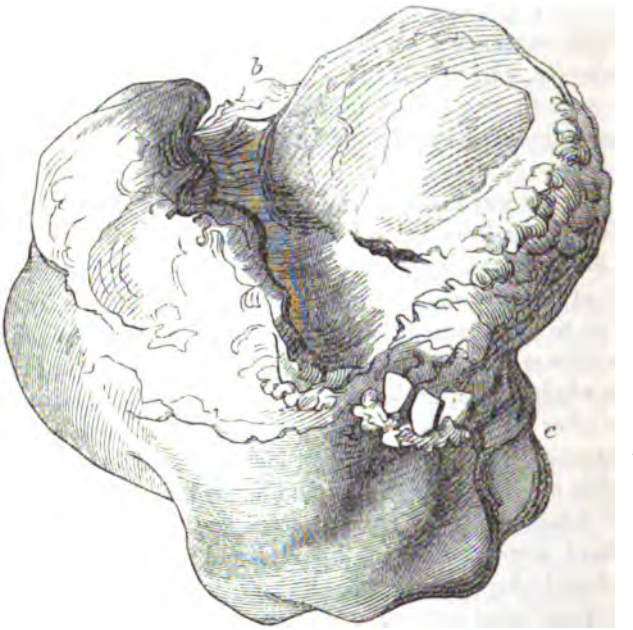
The patient was seated in a strong arm chair, and complete anæsthesia induced by the inhalation of a solution of chloroform in ether.

An incision was made on the left side of the mesial line of the chin, extending from below the coronary artery of the lip down to the lower extremity of the symphysis menti, and was then extended at a right angle from this point along the base, to a point posterior to the angle of the jaw on the right side, freely dividing all the tissues down to the bone and tumor, thus leaving the prolabium whole. The facial artery was secured by ligature immediately after its division. The cheek comprising the upper flap, was detached from the tumor and lower jaw, and thus the entire right side of the cavity of the mouth was laid open. The lower flap of integument was now dissected from the tumor and jaw, downward nearly to the os hyoides and trachea, during which two arterial twigs required ligation.

The bone being isolated at the symphysis and angle, sufficiently to admit one blade of the bone forceps, by separating it from the tissues attached to its inner surface, the left central incisor tooth was extracted, and Hey's saw applied to the mental portion externally, obliquely from the left side of the median line above to the right side below, so as to preserve the genial tubercles within, to which the anterior muscles of the tongue and the elevators of the os hyoides are attached, and thus obviate the necessity of transfixing the tongue by tenaculum or ligature to prevent suffocation from its retraction. The saw was next applied to the

angle, and the division of the osseous tissue at both points completed by the bone-forceps. The tumor was then separated from its remaining attachments by dissection within the mouth, where two more ligatures were applied to branches of the lingual artery, and the actual cautery employed at one or two points, which completely arrested the hæmorrhage.

On examination of the tumor and the chasm made by its removal, it was found that the adventitious mass—as here shown in a cut by Gihon, from a drawing by Dr. Jeremy Wilson—was en-



a. Sulcus, which received the teeth of upper jaw.
b. Posterior section of jaw.
c. Anterior section of jaw.

tirely abstracted, and that the surrounding tissues and organs had merely been pushed aside by it. The submaxillary and sublingual glands, as well as the muscles of the locality, were distinctly in view, although displaced, by the previous pressure of the tumor.

The bone at the points of section was perfectly healthy, al-

though unusually compact and hard, which somewhat embarrassed its resection.

The patient lost about twelve ounces of blood, but the pulse did not flag under the operation.

A silver plate, previously moulded to the teeth of the superior and inferior maxillæ of the left side by Dr. Ingram, was now applied, and the remaining portion of the lower jaw thus fixed in its proper position, when the wound was closed by the introduction of seven needles forming twisted sutures, adhesive strips being placed between. The space formerly occupied by the tumor was partly filled with dossils of lint, which restored the symmetry of the face, and a narrow bandage applied beneath the jaw and over the vertex prevented any displacement of the parts. Cold water dressings were ordered.

The patient was carried to his bed in an adjoining room; the pulse being 100 in the minute.

In the evening, pulse was 108; patient comfortable.

At 10 o'clock, P. M., pulse 120. Sol. morphiæ sulphat. f℥ij administered.

Oct. 20*th*, 9 o'clock, A. M.—Has slept well; pulse 108, full and soft. Complains of no pain.

21*st*.—Pulse 98. Renewed the lint, and administered magnesiæ sulphat. ℥j, which operated twice.

22*d*, 1 o'clock, P. M.—Exhibited patient to the class. Progressing favorably; the external wound has united throughout its entire extent, except where the arterial ligatures pass out. Needles removed and adhesive plasters renewed.

23*d*.—Again renewed the lint. Pulse 90, and all other symptoms favorable.

From this time forward the patient recovered rapidly.

The tumor was examined, and found to be homologous in structure, being an Enchondroma. The elementary constituents, as proven by the microscope, are benign in their character.

The patient was exhibited to the class on Saturday, Nov. 19th, and discharged cured. The line of incision being for the most part under the base of the face, can hardly be observed. The vertical section on the chin, not having extended through the prolabium, leaves but a trifling cicatrix. The contour of the face is not materially affected, and its symmetry very slightly interfered with.

BIBLIOGRAPHICAL NOTICES.

La Syphilisation étudiée comme méthode curative et comme moyen prophylactique des maladies vénériennes, par C. SPERINO, Agregé a la Faculté Médico-Chirurgicale de Turin etc. Paris, 1853.

Syphilization studied as a Curative and Prophylactic measure in Venereal Diseases, etc.

No experiments have excited more interest amongst professional men, than those recently performed in Europe, to test the value of syphilization.

Without discussing the question whether syphilis was known to the ancients or not, we may state that an accurate knowledge of venereal diseases cannot be traced back further than John Hunter. His experiments, indeed, repeated and modified by Ricord, have led to the adoption of a system which has served as a basis for the diagnosis and treatment of all venereal diseases. The most important points Ricord established were:

1. That chancre and blennorhagia are two distinct affections.
2. That only indurated chancres are followed by constitutional syphilis.
3. That only indurated chancres require a constitutional treatment.
4. That secondary affections are not inoculable.
5. That syphilis cannot be transmitted to animals.

Experiments performed by M. Auzias-Turenne, to test the truth of this last proposition, led him to the observation of the curious fact, that each successive chancre inoculated is smaller than its predecessor. Several inoculations performed on a medical student seemed to be followed by the same result; and these gave rise to the doctrine of "syphilization," or the inoculation of syphilitic virus as a prophylactic measure against syphilis, and as a therapeutical agent for its cure. "If," says M. Auzias-Turenne, "each successive chancre is smaller than its predecessor, must we not ultimately arrive at a point in which the constitution is so impregnated with syphilitic virus as to be incapable of re-

ceiving new chancres?" An individual who has arrived at this point of syphilitic "saturation" he called *syphilized;* the process itself, syphilitic vaccination or *syphilization.*

Had the means of cure hitherto possessed, been found adequate to the treatment of all syphilitic diseases, syphilization would have attracted, at best, but a passing attention. But every one knows how many old syphilitic affections prove refractory under the usual method of treatment, and, therefore, every new agent proposed is always eagerly tried. The hope, too, of acquiring celebrity by discovering a new remedy for syphilis, excited many to enter upon the field of experimentation, whilst others were induced by the controversy to repeat Ricord's experiments on inoculation, with the view of testing their value. Thus originated the experiments on inoculation and the discussions on syphilization, which have so recently been agitating the profession abroad.

Amongst those who, without entering into the subject of syphilization, confined their experiments to inoculation, we may mention Prof. Waller, of Prague,* M. Vidal de Cassis,† M. Maisoneuve ;‡ amongst those who made use of syphilization on patients, M. Auzias Turenne, M. Diday, of Lyons, and M. Sperino, of Turin. This latter observer, indeed, has recently published a complete work on the subject, containing not only all that up to the time had been written on syphilization, but also a report of ninety-six cases, in which this method was employed with great success. M. Sperino's work occupies over 800 pages, chiefly made up of the narration of cases. Of its contents, therefore, we can give but the merest sketch.

The author states in his preface, that his experiments were performed with the greatest care and precision, and the results

* Ueber den contagiöesen character der secundaeren syphilis; Prague, 1851.

† Traité des Maladies Vénériennes; Paris, 1853.

‡ Traité pratique des Maladies Vénériennes. Par G. Maisoneuve, et Montonier; Paris, 1853.

Matter bearing on this subject will further be found in the Report of the Paris Commissions to the Prefect of Police. (Report á M. le Préfet de Police sur la question de savoir si M. le Dr. Auzias-Turenne peut être autorisé à appliquer la Syphilization á l'infirmerie de la Prison St. Lazars? par M. M. Melier, Ricord, Denis, Conneau et Marchal de Calais), and in Ricord's letter on Syphilis (Lettres sur la Syphilis; Paris, 1852.)

given with the loyalty of a man of honor. We are bound to believe him, although some of his facts seem almost incredible. He commences his work with a consideration of the value of inoculation, as applied to venereal diseases. Inoculation, he says, has been recently practised for seven different purposes:

1. To prove the existence of a syphilitic virus.
2. To distinguish true from false syphilitic diseases.
3. To establish the differences which exist between primary and secondary syphilitic affections.
4. To prove the efficacy of certain therapeutical agents called preservatives.
5. To ascertain if syphilitic diseases could be communicated to animals.
6. As a therapeutical measure against syphilis.
7. As a prophylactic agent against this disease.

We pass over the first five propositions (mentioning only that M. Sperino denies the difference between syphilis and blennorhagia) and revert to propositions six and seven, or the value he attaches to inoculation as a prophylactic and therapeutical agent. Speaking of its efficacy he says in his Report to the Academy at Turin:

"All recent chancres existing in women who were subjected to this treatment disappeared spontaneously a few days after the appearance of the artificial chancres. Indurated syphilitic ulcerations which had existed for two or four years, and had resisted a treatment by mercury, by iodide of potassium, or even by the acid nitrate of mercury, or the Vienna paste, cicatrized rapidly after a few inoculations with pus taken from the recent chancres of other women. Large and deeply rooted virulent ulcerations cicatrised a short time after inoculation, and, what is more astonishing, I saw in a woman who had a chancre and two inguinal buboes, in both of which, distinct fluctuation could be felt, the pus absorbed and disappear in a few days after the inoculation on the abdomen of several artificial chancres. Mucous tubercles existing at the same time with the chancres, disappeared under the powerful action of inoculated virus. A large ulcer situated on the posterior portion of the pharynx, healed up after the 5th inoculation. In one woman herpiginous ulcers having their seat on the right leg cicatrized rapidly, whilst, at the same time, the pains in the frontal bone disappeared after the development of the artificial chancres.

The harmlessness and the advantage of syphilitic inoculation, became at last so well known to the patients, that they themselves, forgetting their reluctance to the first trials, begged me to syphilise them, as their companions had been thus cured."

The method of producing the artificial chancres consists in puncturing the skin with a lancet, on which venereal matter has been collected. The place best suited is the thigh or abdomen. The chancres thus produced do not differ in appearance from ordinary chancres, except that, after repeated inoculations, they become smaller. The number of inoculations necessary to produce syphilization we do not find mentioned; in some cases five, in others sixty or more seem to have been necessary. The cicatrices of these artificial chancres are very superficial, except when they become gangrenous. During the treatment by syphilization, baths and purgatives were freely employed; the cicatrices were dressed with simple cerate.

Now follows the report of ninety-six cases cured by syphilization. To attempt a full analysis of these cases would carry us far beyond the limits assigned to a review; we therefore select but one of the most striking and interesting. (Observation I, p. 116.)

"Julia P., age 22, of a sanguine-lymphatic temperament and excellent constitution, entered the hospital on the 29th of January, 1851.—She has on her body several chancres, viz., an urethral chancre, evidently indurated, a chancre in the fossa navicularis in size about 12 millimetres and also indurated, and two large and irregular chancres situated on the sides of the urethra. It is the second syphilitic infection under which she labors. In 1845 she had an indurated chancre on the vulva, accompanied with a bubo in the groin, and mucous tubercles around the arms and vulva. She was then treated with 40 mercurial inunctions. Constantly returning vegetations obliged her to remain in the hospital during the whole of the year 1846. As excision and cauterization did not prevent their reproduction, I subjected her to a new treatment by inunction. But even this did not triumph over the "vegetative" power of the vulvo-vaginal mucous membrane. The vegetations finally yielded to deep incisions and repeated cauterizations. Since 1845 up to this day, she has been sent nine times to the hospital with chancres, twice complicated with urethral blennorhagia, and which have always been cured by a simple local treatment.

20th of January, 1851, (the day she entered the hospital,) an inoculation was made on her left thigh, with the pus taken from her other chancres; a large pustule was the result, which soon changed into a syphilitic ulcer; the inoculation was repeated on the 31st, and another pustule was the result.

27th of February.—These two artificial chancres are cicatrized. Their size is not over eight millimetres. Three of the chancres on the vulva are in progress of cicatrization, and have diminished already considerably—namely, the one on the fossa navicularis and the two occupying the side

of the urethra. The one situated on the canal and the orifice of the urethra is still virulent, as three inoculations made with the pus it secretes produced three pustules."

3*d of March.* Two more inoculations which were repeated on the 10th and 13th, with the pus taken from artificial chancres of another woman. We have now altogether 6 chancres produced by inoculation.

20*th of March.* The 6 chancres produced from the three last inoculations are still open; their size varies between three and six millimetres. They are very superficial.

The chancres on the sides of the urethra, as well as the one in the fossa navicularis, have headed. The urethral chancre is in process of granulation, but its induration still persists. Four more inoculations made with the pus taken from the chancre of another woman, who had just entered the hospital, produced no effects.

3*d of April.* Four more inoculations; no result.

10*th of April.* All the artificial chancres are cicatrized.

21*st of April.* Three more inoculations; three more chancres.

28*th of April.* Two more inoculations; no result.

29*th of May.* Three more inoculations on abdomen, and two on the internal surface of the nymphæ; no result.

29*th of June.* Julia P. has been received into the hospital as a nurse. The induration of the urethra has not completely disappeared. Some fungosities still remain in the urethral canal; they are touched from time to time with the nitrate of silver. It is thought advisable to continue from time to time the inoculations with the view of producing a complete syphilization. On the seventh of July two new inoculations without result. On the twentieth of July, six new inoculations without without result.

31*st of December*, 1852. Julia P. is still in the hospital as a nurse. Her health is excellent, and she has never had the slightest symptoms of constitutional infection. In conclusion I may remark, that in this case I observed two indurated chancres separated from each other by long intervals of time. The first appeared under the use of mercurials; the second by syphilization. I know that this case will find many incredulous persons amongst the followers of Ricord, but truth should triumph over all theories."

This is certainly a case which, if correctly stated, would tend to prove the efficacy of syphilization. If the second chancre was really indurated, it ought, according to the doctrines of Ricord, to have been followed by a constitutional syphilis at furthest within six months after the primary affection; whilst M. Sperino had an opportunity of examining the patient for nearly two years, and could observe no secondary symptons.

We might add several more of these cases, and especially those of inveterate constitutional syphilis, in which this treatment

seems to have been employed with great success, (see pp. 248, 337, 475,) but we can here but notice the principal facts they contain, which are mostly in direct opposition to the doctrines of Ricord, and may be grouped together as follows:

1. Indurated chancres are often followed by suppurating buboes.

2. Non-indurated chancres may be followed by constitutional syphilis.

3. Blennorhagia may give rise to constitutional syphilis.

4. Syphilization will cure when mercurials and Iodide of Potassium fails.

Out of the ninety-six cases Mr. Sperino reports, we have fifty-three affected with primary, and forty-three with constitutional syphilis. Of these fifty-three cases of primary syphilis, fifty were treated by syphilization, and only in two the treatment was unsuccessful. In one case mercurial treatment was employed at the same time. Out of the forty-three cases of constitutional syphilis, six were treated by syphilization and the iodide of potassium; eight by means of syphilization, iodide of potassium, and mercury; two died, leaving twenty-three cases cured by syphilization only. A careful examination of the history of the patients affected with primary syphilis will show that a great many had non-indurated chancres, which probably would not have given rise to any constitutional syphilis, and which would have recovered under a simple local treatment. In the cases of secondary syphilis, syphilization seems to have proved singularly efficacious, and yet the occurrence of phagedenic ulcers after inoculations, (a circumstance which M. Sperino himself admits,) makes even here the remedy but little less dangerous than the disease. The time employed for this treatment varies: one case was cured in less than a month; four in one to three months; seven, three to six months; eight, six to nine months; eight, nine to twelve months; twenty-one, twelve to fifteen months; whilst twenty-seven required from fifteen to seventeen months. A much longer period than would tend to prove the efficacy of syphilization by any of the ordinary treatments.

With these tables of the time employed, M. Sperino terminates the most important part of his work. The succeeding chapters are lengthy and tedious. They consist mainly in a continued

repetition of what has already been said, and in an abuse of Ricord and his followers. M. Sperino toils, too, to prove that in all cases in which syphilization did not succeed after repeated inoculations, it could be attributed to some fault in inoculating. He endeavors, indeed, to show that the celebrated case of Dr. L——* who after more than two hundred inoculations, was not yet syphilized, could be attributed to this. We will not follow M. Sperino in the terminal chapter of his book, which are devoted to an analysis of all the writings on syphilization, and to a correspondence between himself and several syphilographs. The most important conclusions M. Sperino arrived at, he himself states to be:

1. Syphilization will cause the symptoms of primary syphilis to disappear.

2. Syphilization, instead of being rejected as a prophylactic measure of primary syphilis, ought, on the contrary, to be carefully studied in this point of view, as we have but a small number of individuals completely syphilized, who have contracted a new infection.

3. Syphilization ought, as much as possible, to be limited to the treatment of constitutional syphilis until we are certain that syphilization prevents the syphilized from contracting a new infection.

With these general deductions the work of M. Sperino terminates. As to the truth of the principles on which the doctrines it professes are based, we refrain from giving an opinion. A work containing a report of cases and with the motto *non verbis, sed factis,* can only be refuted with a sufficient number of facts demonstrating the contrary. Whether repeated inoculations make it impossible for new chancres to be contracted, future researches will show. We have now already some observations (as the one of Dr. L——,) which will tend to show the fallacy of even this view. As a therapeutical measure we do not see, even if the statement of the cases be correct, any advantage syphilization possesses in efficacy or in shortness of duration over the remedies we at present employ. As a prophylactic measure it

* Dr. L—— was presented to the Academy in Paris, in June, 1853, by M. Ricord, and a report read on his case.

is highly dangerous and demoralizing, and we agree with Ricord in his exclamation at the Academy:

"If, after all, syphilization, as it is *at present* presented to us, should be true, it ought, nevertheless, to be legally prohibited as a prophylactic measure, and rejected as a treatment."

Lectures on Surgical Pathology, delivered at the Royal College of Surgeons of England. By JAMES PAGET, F. R. S., late Professor of Anatomy and Surgery to the College, Assistant Surgeon and Lecturer on Physiology at St. Bartholomew's Hospital. Philadelphia. Lindsay & Blakiston, 1854. 8vo. pp. (with index) 699.

This book consists of a series of lectures delivered by Mr. Paget, a few years since, in the chair of Anatomy and Surgery in the Royal College of Surgeons of England. Some of them have already appeared in other forms. But their popularity has happily induced the author to amplify and revise them, and present them in this shape to the profession.

The title of the work is hardly expressive of its scope and value. It is, indeed, nominally restricted to the pathology of diseases which belong, in treatment, to the domain of surgery rather than of medicine. But it is really illustrative of the general subject of pathology, and will be read with equal interest and instruction by both the physician and the surgeon.

Mr. Paget has long been ranked among the foremost minds of the profession in Great Britain. And his pursuits have perhaps especially fitted him for such a subject as that of this book. "Engaged in the simultaneous practice of surgery and teaching in physiology,"—formerly Professor of Anatomy and Surgery, and now Lecturer on Physiology—he has certainly enjoyed particular advantages for "illustrating the general pathology of the principal surgical diseases, in conformity with the larger and more exact doctrines of physiology." These advantages have been admirably turned to account in the masterly work which now commends itself to the notice of the American profession.

The subjects treated in these lectures are the following:—1. Nutrition, its nature, purpose, and conditions. 2. The conditions necessary to healthy nutrition. 3. The formative process; Growth. 4. Hypertrophy. 5. Atrophy; Degeneration.

6. Atrophy. 7. General considerations on Repair and Reproduction. 8. The Materials for the Repair of Injuries. 9 and 10. The process of the Repair of Wounds. 11. The Repair of Fractures. 12. The Repair of Injuries in various tissues. 13. Phenomena of Inflammation. 14. Products of Inflammation. 15. Developments of Lymph. 16. Degeneration of Lymph. 17. Changes produced by Inflammation in the affected part. 18. Nature and Causes of Inflammation. 19. Mortification. 20. Specific Diseases. 21. Classification of Tumours. 22. Simple or Barren Cysts. 23. Compound or Proliferous Cysts. 24. Fatty and Fibro-Cellular Tumours, Painful Subcutaneous Tumours. 25. Fibrous Tumours. 26. Cartilage Recurring Fibroid and Fibro-nucleated Tumours. 27. Cartilaginous Tumours. 28. Myeloid and Osseous Tumours. 29. Glandular, and Vascular or Erectile Tumours. 30. Scirrhous or Hard Cancer. 31. Medullary Cancer. 32. Epithelial Cancer. 33. Melanoid, Hæmatoid, Osteoid, Villous, and Colloid Cancers. 34. General Pathology of Cancer. 35. Tubercle.

We cannot attempt to follow Mr. Paget through these subjects in detail. His views, however, on the highly interesting subjects of the origin, progress, and products of inflammation, deserve to be presented somewhat in extenso.

Mr. Paget thus sums up his conclusions as to the circumstances which may determine the characters of an inflammatory exudation to be adhesive or suppurative.

"To sum up, then, what may be concluded respecting the conditions that, in the first instance, may determine the adhesive or suppurative characters of an inflammatory exudation; they are, 1*st*, The state of the blood,—its diathesis or crasis,—the power of which is evident in that the same material may be exuded in many inflamed parts in the same person; in that this material may exhibit peculiar characters correspondent with those of the blood itself; and in that, in different persons, an inflammation excited in the same tissue, and by the same stimulus, will produce different forms of lymph, corresponding with differences of the blood. 2*d*, The seat of the inflammation, and the tissue or organ affected; of which the influence is shewn by cases in which, with the condition of blood, different forms of lymph are produced in different parts or organs. 3*d*, The severity, and acute or chronic character, of the inflammatory process, according to which the product deviates more or less from the character of the natural secretion or blastematous effusion in the part.

"The primitive character or tendency of any case of inflammation might be represented as the resultant of three forces issuing from these conditions."

As regards the products of inflammatory exudation, we find the following remarks:

"*Fibrous Tissue*, as the result of the development of lymph, is found when the exudation is interstitial in any fibrous tissue; as in ligaments, capsules of joints, and the like. The best examples of it are in the laminated and nodular thickenings of the capsule of the spleen, or the thickening and induration of the periosteum, or the capsule of the hip-joint in chronic rheumatic arthritis. In all these cases the new material is derived from repeated, but not acute, inflammations; therefore, probably, though excessive, it is not widely different from the normal material for nutrition; and, the conditions for nutrition being little disturbed, it is developed into the exact likeness of the original texture with which it is intermingled and confused.

"As the fibro-cellular and fibrous tissues, formed from inflammatory lymph, become more perfectly organized, they are prone to contract; imitating the contraction already described in granulations and scars (p. 236). Hence, in part, the contraction of the wall of the chest after pleurisy, and the various displacements and deformities of organs that have become adherent to adjacent parts; hence, in part also, the contractions of inflamed organs, as of the liver in cirrhosis; hence, too, an addition to the rigidity of joints when the parts around them have been inflamed; and hence, with yet greater mischief, the contractions of the thickened valves and tendinous cords of the heart.

"*Adipose Tissue* may be formed, if not directly from inflammatory lymph, yet in the fibro-cellular tissue of completely organized adhesions. I think it is not often so formed; but, lately, Dr. Kirkes found a lung of which all the anterior part was covered with well-organized false membrane; and in part of this was a quantity of perfect adipose tissue, more than four ounces in weight.

"*Elastic Tissue* is sometimes abundantly formed in the adhesions developed from inflammatory lymph. I have not seen it except in such as are completely organized; and I think it is, in this case, as in the formation of scars, a late production. I believe, also, with Virchow, that its formation depends, in some measure, on the membrane that is inflamed; pleural adhesions being most favorable to it. In these it is often abundant; its principal, but always slender, filaments lying in the same general direction as those of the fibro-cellular tissue.

"*Epithelium* I have already mentioned as covering the surfaces of well-formed adhesions. I know of no observations proving whether the epithelial cells are developed directly from the lymph, or are a later construction from materials derived from the blood of the adhesion's vessels; but it is not rare to find, in inflammation of serous membranes, recent lymph-cells presenting many characters indicative of development towards epithelium; flattened and enlarged, and having circular or oval clear nuclei.

"*Bone* is often formed from inflammatory lymph. It may appear as a late transformation of lymph that has been organized into perfect fibrous tissue; as in the osseous plates that are sometimes found in the false membranes of the pleura, or in the pericardium. In most of these, however, there is not true bone, but an amorphous deposit of earthy matter, which is imbedded in the fibrous tissue, or which (as Rokitansky holds) is the residue of the degenerated and partially absorbed tissue."

Again, on the formation of blood-vessels in effused lymph:

"1. The direct observations supposed to prove that blood is formed in lymph are very liable to fallacy, through the facility with which blood may be accidentally mixed with the lymph, in consequence of hæmorrhage during life or after death, or in the preparation of the specimens. Where these sources of fallacy have been avoided, I have never seen anything suggestive of a transformation of lymph into blood.

"2. The development of blood from tissue-cells is limited, naturally, to the earliest period of embryo-life, as if it needed the greatest amount of force for development; afterwards, blood is not formed except through a long process of elaboration, and with the aid of many organs. Its formation, therefore, in the mal-conditions of inflammation is very improbable.

"3. In no specimen of inflammatory lymph have I seen appearances of transitions from lymph-cells to blood-cells, such as we may see in the lymph of the lymphatics, both before and after it is poured into the blood-vessels.

"4. Neither in any lymph have I seen appearances of such stellate cells as the interstitial bloodvessels of the early embryo are formed from; nothing comparable with them has ever come into view.

"5. In the formation of vessels for granulations and the walls of chronic abscesses, all is favorable to the belief that they grow up from the bloodvessels of the adjacent parts; and there are no structures to which the lymph bears so close analogy as it does to these, or to which it is so likely to be conformed in the production of its vessels.

"On the whole, therefore, although direct observations are wanting, I think we may conclude that all the vessels of inflammatory lymph are formed by outgrowth from adjacent vessels, as in the process of repair, and that through these vessels, not by its own development, it derives its supply of blood."

We conclude these extracts with Mr. Paget's views on the intimate nature of inflammation.

"If we consider the quantity of organic formation effected during the inflammatory process, in the proper substance of the inflamed part, it is evidently less than in health. All the changes described in the last lecture are examples of diminished or suspended nutrition in the tissues of the inflamed part; they are all characteristic of atrophy, degeneration, or death. The tissues become soft, or quite disorganized; they are relaxed and weakened; they degenerate, and remain lowered at once in structure, chemical composition, and functional power; or else, after

degeneration, they are absorbed, or are disintegrated, or dissolved, and cast out; they die in particles or in the mass. During all the process of inflammation there is no such thing as an increased formation of the natural structures of the inflamed part; they are not even maintained; their nutrition is always impaired, or quite suspended. It is only after the inflammation has ceased that there is an increased formation in some of the lowly organised tissues, as the bones and cellular tissue.

"So far, then, as the proper substance of the inflamed part is concerned, there appears to be decreased action; that is, decreased formation. There may be, indeed, an increased absorption; but this is also, in one sense, characteristic of decreased exercise of vital force; since all absorption implies a previous degeneration of the part absorbed. Nor can we justly call this, in any sense, 'increased action,' till we can shew how absorption is an action of vessels.

"Thus far, one of the constituents of the inflammatory process, one of the characters in which it differs, in respect of quantity, from normal nutrition, is a defect in the nutrition of the proper substance of the inflamed part.

"But it is characteristic of the complete process of inflammation, that, while the inflamed structure itself suffers deterioration, there is a production of material which may be peculiarly organized. Here, therefore, may be an evidence of increased formation, of increased action.

"Doubtless, in relation to the productive part of the inflammatory process, the expression "increased action" may be in some sense justly used; for the weight of an inflamed part, or of the material separated from it, may be much increased by the formation of organized matter. But the quantity of organized matter formed in an inflammation must not be unconditionally taken as a measure of increase in the exercise of the vital forces; for it is to be observed, that the material formed presents only the lowest grades of organization, and that it is not capable of development, but rather tends to degeneration, so long as the inflammation lasts.

"It may be but a vague estimate that we can make of the amount of force exercised in any act of formation; yet we may be sure that a comparatively small amount is sufficient for the production of low organisms, such as are the fibrinous and corpuscular lymphs of inflammation. The abundant production of lowly organized structures is one of the features of the life of the lowest creatures, in both the vegetable and animal kingdoms. And, in our own cases, a corresponding abundant production is often noticed in the lowest states of vital force; witness the final inflammations, so frequent in the last stages of granular degeneration of the kidneys, of phthisis, of cancer, and other exhausting diseases. In all these, even large quantities of the lowly organized cells of inflammatory lymph may be formed, when life is at its last ebb. And with these cases those correspond which shew the most rapid increase of tubercle and cancer, and of lowly organized tumors, when the health is most enfeebled, and when the blood and all the natural structures are wasting.

"From these considerations we conclude that the productive part of the inflammatory process is not declaratory of the exercise of a large amount of formative or organizing force; and this conclusion is confirmed by observing that development, which always requires the highest and most favored exercise of the powers of organic life, does not occur while inflammation lasts. The general conclusions, therefore, may be, as well from the productive, as from the destructive, effects of the inflammatory process, that it is accomplished with small expenditure of vital force; and that even when large quantities of lymph are slowly organized, such an expression as 'increased action' cannot be rightly used, unless we can be sure that the defect of the formative power, exercised in the proper tissue of the inflamed part, is more than counterbalanced by the excess employed in the production and low organization of lymph.

"It may be said that the signs of inflammation are signs of increased action. But these are fallacious, if again, by increased action be meant any increased exercise of vital force. The redness and the swelling of the inflamed part declare the presence of more blood; but this blood moves slowly; and it is a quick renewal of blood, rather than a large quantity at any time in a part, that is significant of active life. An abundance of blood, with slow movement of it, is not characteristic of activity in a part; it often implies the contrary, as in the erectile tissues, and the cancellous tissue of bones.

"The local increase of heat is too inconstant to afford ground for judging of the nature of inflammation. When manifest, it is not, I think, to be exactly compared with that of an actively growing part, or of one which is the seat of 'determination' of blood, or of 'active conjestion." In these cases the heat is high, chiefly because the blood, brought quickly from the heart, is quickly renewed; but in an inflamed part the blood is not so renewed; it moves more slowly. The heat may, indeed, be in some measure ascribed to this condition; for the quickly moving blood around the inflamed part may communicate its heat to that which is moving more slowly. But the proper heat of inflammation (I mean that which is measureable by the thermometer) cannot, I think, be wholly thus explained. Some of it is probably due to the oxidation of the degenerating tissues; a process which we might safely assume to be rapidly going on in the more destructive inflammations, and which is, indeed, nearly proved by some of the evidences of the increased excretion of oxidized substances in inflammations, especially by the increase of phosphates in the urine during inflammation of the brain. It is far from proved, indeed, that this source of heat is sufficient for the explanation of the increase in an inflamed part; and it may be at once objected that we have no evidence that the hottest inflamed parts are those in which the most destructive processes are going on. Still, in relation to the question, how far the increased heat is a sign of the quantity of formative force that is being exercised, we may argue that, as the general supply of heat in our bodies is derived from oxidation or combustion of wasted tissues or of surplus food, so, in these local augmentations of heat, the source is rather from some similar destruction of or-

ganized substances, than from increased formation of them. If it be so, increased heat will give no ground for regarding the inflammatory process as the result of a greater exercise of formative force than is employed in ordinary nutrition; none for speaking of it as increased nutrition, or increased action. Rather, this sign may be added to the evidences that the inflammatory process presents, of diminished formative force, and of a premature and rapid degeneration, in the affected part."

The Medical Formulary: being a Collection of Prescriptions, etc., etc. By BENJAMIN ELLIS, M. D., late Professor of Materia Medica in the Philadelphia College of Pharmacy. *Tenth Edition, Revised and much Extended.* By ROBERT P. THOMAS, M. D., Professor of Materia Medica in the Philadelphia College of Pharmacy. Philadelphia, Blanchard & Lea. pp. (with index) 296.

This standard old favorite is here introduced for the *tenth* time to the American profession, under the editorial supervision of Dr. R. P. Thomas. Numerous improvements and additions have been introduced, and "all the formulæ embracing officinal articles have been brought to the standard of the National Pharmacopœia."

Yellow or Malignant Bilious Fever in the Vicinity of South Street Wharf, Philadelphia, 1853. By WILSON JEWELL, M. D. pp. 40.

Dr. Jewell's valuable and interesting report on the Yellow Fever which prevailed in our city last summer, (as read before the College of Physicians, Aug. 3 and Sept. 7, 1853,) is here presented in pamphlet form. Our readers have already had the benefit of a synopsis of this report in the editorial columns of our journal for September and November. The more detailed history of the Fever, however, as contained in the report, should be generally read.

A Treatise on the Venereal Disease. By JOHN HUNTER, F. R. S. *With Copious Additions.* By Dr. PHILIP RICORD. *Edited with Notes.* By FREEMAN J. BUMSTEAD, M. D., Physician to the North-Western Dispensary, New York. Philadelphia: Blanchard & Lea, 1853. 8vo. pp. (with index) 520.

This many-headed book presents us the great Treatise of John

Hunter on the Venereal Disease, surrounded with a rather complicated net-work of "notes and additions." The original treatise of Hunter (of the edition of Mr. G. G. Babington, and including the contributions of Sir Everard Home,) was published in Paris in 1840, with annotations by M. Ricord. The volume before us consists of a translation by Dr. Bumstead of M. Ricord's annotations, and à reprint of Mr. Babington's edition, with notes and additions by the American editor. The additions to the original text are thus four-fold; and the usual editorial brackets present the rather startling array of interpolated names—"RICORD," "HOME," "EDITOR," and "G. C. B."

Exception may, we think, be not unreasonably taken, in some particulars, to this mosaic style of publication. But we must admit that an acceptable service has been performed in presenting this book to the profession. The observations of John Hunter on the Venereal Disease, must, as Mr. Babington justly observes, "always form an essential part of the study of every surgeon who wishes to make himself acquainted with the disease of which it treats;" and upon the value of the facts and opinions of Ricord, which are engrafted on it, we need not dwell. The notes and additions of the American editor are judicious and interesting. An index has been added, too, which cannot fail to increase the usefulness of the work.

THE MEDICAL EXAMINER.

PHILADELPHIA, DECEMBER, 1853.

VALEDICTORY.

With this number the connection of the present editors with the Medical Examiner ceases. In terminating an editorial career which has extended through many years, and which, with one of the editors, dates from the foundation of the Journal, we beg to express our warm acknowledgements for the constant professional support that has encouraged and lightened our labors; and to tender a respectful and most cordial parting salutation to the *readers*, with whom we have so long communed. In reverting to the editorial conduct of the Journal which now passes from our control, we feel that we may at least take the credit of a steadfast and uniform endeavor to maintain in its columns the rights and honor of our Profession, and to advance the great objects of medical science.

Dr. SAMUEL L. HOLLINGSWORTH will assume the editorial duties of the Medical Examiner, from the commencement of the ensuing year. We have the sincerest pleasure in resigning our position in his favor, for we know no one better qualified by talents, acquirements, experience, and social and professional station, to maintain and increase the efficiency and reputation of the Journal. In its prosperity we feel the deepest interest, and our connection with it will always be among the most agreeable of our professional retrospects.

HARVEY DEMONSTRATING THE CIRCULATION.

Though the politeness of Messrs. C. J. Price & Co., of Philadelphia, we have received a copy of a print bearing the above title, and desire to call the attention of the medical profession to it as a work of art.

The object of this work is, by furnishing a pictorial record of an incident in the life of a great man, to extend a knowledge of one of the most important discoveries in science, and to keep alive in the hearts of all who admire genius, gratitude to the memory of one of the greatest discoverers. Nothing seems more obvious, or more readily understood, than the function of the heart; but, until the time of Harvey, it was involved in the greatest obscurity, and mixed up with all manner of contradictory absurdities. And yet before his day many

things were made out; the pulmonary circulation was understood, and several other essential points had been established; still the great inference had never been drawn. So often are we on the very threshold of a discovery, which by some fatality we miss; and, when it is at length made, can only express our astonishment that we were so marvellously purblind as to overlook it. The same services which Newton rendered to optics and astronomy, by his theories of light and gravitation, Harvey conferred upon anatomy and medicine by his doctrine of the circulation of the blood.

The scene represents Harvey's apartment in the palace. The king is seated in the front of the picture. The courtier who stands behind him, with his hand familiarly resting on the back of his chair, indicates the attachment and devotion of the cavaliers in those times of danger to the king. The skull and the nearly spent hour-glass behind this group may have a meaning to the moralist. The close proximity of the young prince to the philosopher indicates the gentle character of the man, and the inoffensiveness of the operation. The prince has suspended the perusal of Harvey's favorite author, for the greater excitement of his friend and tutor's demonstration. The extreme fondness for anatomical studies which in after-life characterized both Charles II. and James II. is thus explained.

The courtier behind is one of that class of gentlemen who, in reference to the advancement of social and philosophical conditions, "cares for none of these things;" he is permitting himself to be entertained by some of Harvey's opponents. These are incarnations of pedantic bigotry and stolid imbecility—the two great opponents of scientific progress—who, by insult and obloquy, show their hatred of him who dares, by asserting truth, unsettle their long-cherished absurdities.

The artist has taken great pains to preserve the likeness of Harvey, and was guided by the excellent portrait by Cornelius Jansen, in the College of Physicians, the authorities of which most kindly placed that and all the college contained concerning Harvey at his disposal.

The picture is the property of Joseph Hodgson, Esq., F. R. C. S., of Westbourne Terrace, Hyde Park, and has been reproduced in this country by Mr. G. S. Appleton, of New York.

MEDICAL NEWS.

DEATH FROM CHLOROFORM DURING ITS ADMINISTRATION PREVIOUS TO AN OPERATION FOR HERNIA.

[Under the care of Mr. QUAIN.]

Mr. Hillier, the resident Medical officer, has favored us with the following particulars of a case of death from chloroform which occurred recently. The administration of the drug was, as usual, under the care of Mr. Hillier, according to his appointment at the hospital. It will be seen, that the patient had been of intemperate habits; and, as the autopsy revealed, the subject of extensive fatty degeneration of the muscular structure of the heart, and that, previous to the administration, she had been nearly three day's ill, fasting, exhausted, and suffering ultimately from acute peritonitis. These considerations make the fatal result quite comprehensible.

Particulars, etc.—E. R., aged 40, a woman of moderate height, rather thin. Her general health has been pretty good; she had not been liable to palpitation or dyspnœa. Had been in the habit of drinking pretty freely. Admitted on October 5, at 11 p. m. She was suffering from the symptoms of strangulated femoral hernia, which had existed two days and a-half. Efforts were made to reduce the hernia, both without and with a warm bath, in which she was for upwards of half an hour, without getting very faint. These efforts being unsuccessful, an operation was at once determined on. Her pulse was at this time regular, and of tolerable strength.

Chloroform was administered in the usual way, on a piece of lint, which was held at first three or four inches from the patient's face, and and then brought to within an inch and a-half of her nose and mouth, leaving space around for the admission of air.

For three or four minutes nothing unusual presented itself; the pulse and respirations proceeded normally. There was put on the lint, at first, one fluid drachm of chloroform; and, at the end of three or four minutes, 40 minims more were added. This was the whole quantity of chloroform employed. Within a minute after the second quantity of chloroform was added; the patient struggled violently both with her arms and legs. During these struggles I was holding her right hand, and was unable to feel the pulse, in consequence of her constant motions. The struggling lasted about a minute, and, on its ceasing, the patient commenced to breathe with loud, rough stertor. I at once removed the lint from before the face, and felt for the pulse, which I could not find. Immediately cold water was dashed on to her face. She breathed with this stertor for two or three short inspirations, and then two or three

long ones, and then breathing ceased. Immediately artificial respiration was resorted to, and within a minute galvanism was applied to the back of her neck and the diaphragm. Under the influence of these agencies, the patient gasped about three times at intervals; after this no further signs of life were exhibited.

Tracheotomy was resorted to at the end of a few minutes, and the artificial respiration continued through this opening for about three-quarters of an hour.

At the time when the stertor commenced and the pulse failed, the pupils were dilated, and the face of the patient was only slightly altered. Her tongue was not retracted, for one of the bystanders at once put his fingers into her mouth to ascertain this.

Chloroform from the same bottle had been administered by me on the same day to five patients, in the same manner, without any unpleasant results.

Autopsy made by Dr. Garrod, thirteen hours after Death.—Rigor mortis well-marked in all the limbs. The blood very fluid in all parts of the body.

Abdomen very tympanitic; diaphragm extends up to opposite the fourth rib on the left side, and to third interspace on the right. About an ounce of colorless fluid in the pericardium. The heart quite collapsed and empty,—this may have been due in some measure to the fluidity of the blood.

Anterior aspect of heart covered with fat, muscular substance being visible at one or two points only.

Weight of heart, 7¼ oz.; valves healthy. Walls of right ventricle flabby and pale; mean thickness, one-eighth of an inch. At some parts, the muscular substance is in a very thin layer, being much encroached on by fat. In several places, there is scarcely any muscular fibre visible. This is chiefly the case near the apex. Examined by the microscope, much fatty degeneration of the muscular fibres of the right ventricle generally was discovered.

Wall of left ventricle flabby, dry in appearance and pale; very friable.

Old adhesions on both pleuræ. No appearance of atheroma in thoracic aorta. Both lungs cripitant throughout; not much engorged.—Brain not congested. The arachnoid exhibited marks of chronic thickening and opacity.

The intestines, above the strangulation, were much distended with flatus, and inflamed. The strangulated portion was of a very dark color, and had blood effused into its coats.

Liver, kidneys, and spleen normal.

[*Note.*—We are sorry to have to state, that another death from chloroform has occurred since the above was written. The patient, a woman, aged 19, suffering from rodent ulcer of the vagina, under the care of Mr. Paget, in St. Bartholomew's Hospital, died on Thursday afternoon. The intended operation was the application of the actual cautery. We shall give further particulars next week.]—*London Medical Times, October* 22, 1853.

DEATH UNDER CHLOROFORM.—About a fortnight ago, while the students were assembled in the operating theatre of the Infirmary, to see Mr. Syme's operation of perineal section performed by Dr. Dunsmure, and while chloroform was being administered preparatory to the operation, the patient suddenly expired. Every expedient that was possible under the painful circumstances was immediately resorted to by Dr. Dunsmure and his colleagues, but, unfortunately, without effect. I cannot but think, that a great error in the administration of chloroform prevails in the hospital here. Sufficient precautions are not used to allow a free admixture of atmospheric air with the anæsthetic. When this is attended to, the patient can be put under the influence of the drug more easily and with less suffering to himself, and can be kept under it for many hours consecutively. In hospital practice its administration is commonly entrusted to some raw dresser, who thinking he cannot give enough of a good thing, squeezes a towel saturated with it over the mouth, where it is kept firmly applied, so that the admixture of chloroform with atmospheric air is rendered impossible.—*Ibid, October* 15*th.*

RECORD OF MEDICAL SCIENCE.

PATHOLOGY AND PRACTICE OF MEDICINE.

On the application of Tincture of Iodine as an ectrotic remedy in Small Pox. By JAMES CRAWFORD, M.D., *Professor of Clinical Medicine, M'Gill College, and Physician to the Montreal General Hospital.*

It is now upwards of nine years since I first recommended the application of tincture of iodine as an ectrotic remedy in small pox, and although I observe that the suggestion has been noticed by Dr. Copland, in his Dictionary of Medicine, and by Dr. Dunglison, in his work on Therapeutics, and also by some others in the United States, I would nevertheless desire again to draw the attention of the medical profession to the benefit that a more extended experience has convinced me would follow a general application of the remedy.

Epidemics of the dangerous malady of small pox, have been fortunately

rare amongst us, and therefore the opportunity of further testing this remedy had not been afforded me, till the latter end of the last year, and earlier months of the present, during which period I have had occasion to treat, both in hospital and private practice, several cases of very grave variolous disease, and would desire to lay my further experience before the profession, anxious that a fair trial and just estimate of the application should be made, while I feel fully confident that it will maintain the reputation I have deemed it deserving of. I would here appeal to those who have seen much of the natural small pox, or its effects, how few cases escape pitting and unseemly scars, when the disease is allowed to run its course without interference, and I would ask, how many attempts have been made in consequence, to supply an ectrotic remedy, and how difficult of application, or disagreeable, and even inefficacious, are any that have been hitherto recommended. The Herculean undertaking of cauterizing the several individual pustules, in severe cases, quite precludes its application. I have reason to think the compound tincture of iodine, a very powerful and efficacious remedy, which has been tried with very satisfactory results in the Montreal General Hospital, by my friend Dr. Campbell, but from my being under the impression that the addition of the hydriodate of potass caused more pain, I have not employed this form. The disagreeable mercurial mask, the inefficacious covering of gold leaf, cotton, or collodion, are now in a great measure laid aside. I stated formerly, on the occasion of my first suggestion of this application, in the Medical Gazette published in this city in 1844, that I was led to try it in small pox from the very marked benefit I had derived from its use in erysipelas, and various other cutaneous diseases, for several years previously. I was then satisfied of its *anti-phlogistic* powers and *soothing* effects, and trusted that a more general employment of it in variola would establish its claims to general confidence.

During the late epidemic of variola, I have had several opportunties of trying its powers, and my cases have been observed by many members of the profession, to whom the issue has afforded every satisfaction. I have reason also to know, that several medical practitioners have followed my example with success, while others have made only a very *imperfect* and *insufficient occasional* application, which neither could afford a satisfactory result, nor determine the advantages derivable from it.

I have been favored with the opinion of several physicians of this city, of the highest standing in the profession, on the advantage of using this remedy, which I subjoin.

The application I have used is a saturated solution of iodine, in spirit of wine, *which is to be brushed freely over the face once or twice daily, from the earliest day of the eruption that is practicable, and continuing the repetition of the application daily, or oftener, during the period of the maturation of the pustules. The earlier the application is commenced the more efficacious it proves. The inflammatory and ulcerative processes are controlled, and the intolerable itching relieved,* by which means *scratching*, and its evil consequences, are obviated. For some time I was disposed to confine the application to the face, as being the part

most disposed to ulceration and pitting, as well as that most desirable to be preserved from marks. I have, however, on many occasions applied it to various other parts, for the sake of experiment, or contrast, and also to relieve the intolerable pruritus, and have even extended it over nearly the whole body, at the patient's desire, without any evil consequence or inconvenience from the most extended application. The relief it affords to the itching, (if it conferred no other boon), would of itself be a sufficient recommendation of the application. Its antiphlogistic and febrifuge properties, however, are very manifest, and I have no doubt *modify* and *moderate* the *fever*, and thereby operate in a most salutary manner. The medical treatment I have combined with it is so simple and mild, that a great deal cannot be attributed to it; being merely small doses of calomel and Dover's powder occasionally, during the day, and night, as a sedative. When pits are left, I have observed that they principally occur on the nose, and I am inclined to think that this may in some degree be owing to the insufficiency of the application to this sensitive part, or from the disagreeable vapor causing irritation of the schneiderian membrane, or eyes, which makes the patient more desirous to escape from its application; but even this inconvenience may be easily obviated, by keeping the eyes shut, and, if requisite, stopping the nostrils.

The immediate effect of the application is pain, which is more complained of by some than by others. It speedily subsides, and gradually abates in severity, after the first few applications; and the relief to the itching it affords is so gratifying to the patient, and the effects so manifest to the friends, that they always remark the contrast of the parts "painted," with those left "unpainted;" and frequently request a further extension of the application. I will record very briefly, a few of the cases, some of which were treated in the Montreal General Hospital, and some in my private practice :—

Case 1.—*Variola Discreta.*—J. H., aged 19, admitted into the Montreal General Hospital on the 31st October, 1852, under my care, on the third day of a variolous eruption, which covered the face and limbs very profusely, although distinct. The face was swelled, the tongue covered by a pustular eruption, and there was salivation. The initiatory fever had been severe. He complained much of the itchiness of the face, his pulse was full and frequent. He was ordered to be painted over the face, and to have small doses of calomel and Dover's powder 3 times a-day. One of his arms was also painted for the object of comparison with the other. These parts soon exhibited a marked contrast from those left unpainted. The pustules remained small and formed thin scabs, which fell off early, and left the subjacent parts free from pits. Although this case was grave, there was no bad symptom. It was seen by several medical gentlemen, who expressed their satisfation and conviction of the beneficial effects of iodine, and that it had prevented pitting and marks. Some weeks after convalescence, his face was quite smooth. The patient was uncertain whether he had been previously vaccinated.

Case 2.—*Semi-confluent Small Pox.*—E. B., aged 19, admitted into the Montreal General Hospital, 30th November, 1852, on the second

day of variolous eruption, which had been preceded by high fever, vomiting, epigastric and lumbar pains. It was copious on the face, which was much swelled, his spirits good, slept tolerably well, and without delirium. Eruption became very profuse over the limbs, and confluent on some parts, areola bright. The fever was moderate. Ordered to be painted with tincture of iodine, and to have the calomel and Dover. The crust formed a complete mask over the face, but was thin. The buccal mucous membrane did not appear to be involved in the eruption. The application was made daily, and the case progressed favorably. There were no depressions or marks left on the face. The iodine was also applied to different parts of the body to relieve the itching with very satisfactory results. Did not know whether he had been previously vaccinated.

Case 3.—*Semi-confluent.*—M. M. ætat. 7, (private patient,) to whom I was called on the second day of eruption, which had been preceded by smart fever and vomiting. The eruption was profuse, but distinct, over the face and extremities, with few pustules on the body, the mucous membrane free from it. The patient was said to have been vaccinated. She was ordered, as usual, to be painted. She did not make much complaint of the application, although of such tender years. The pustules on the painted part remained small and flat, quite unlike the other parts. Several pustules on the limbs became confluent—the areola rosy. On the 9th day, some of the pustules on the limbs had a hemorrhagic appearance, the scabs on the face were thin, and the secondary fever light. There was little swelling of the face, and no salivation. About the 10th day, she was attacked by rheumatic pains and swelling of the ankles and knees. Her bowels became disturbed for some days; an abscess formed at the ankles, elbow and axilla; these were discharged. Her strength was supported from an early period by nutritious diet—beef tea, arrow root, wine and quinine. About the 21st day of the eruption, she began to cough, accompanied by a mucous rale, and profuse expectoration, with great dyspnœa at intervals. An emetic, a sinapism, and pediluvium relieved her for the time. The mucous secretion continued profuse, and her strength failed, and she sank on the 31st day. There were only a few small *superficial* pits on her face, which would not have been very observable had she lived. The irritation from the rheumatism, and the discharge from the several abscesses, together with the profuse tenacious bronchial discharge, and consequent orthopnea, carried her off. The case would otherwise have been very satisfactory, although the application was commenced later than was desirable.

Case 4.—*Semi-confluent Variola.*—Miss E. M., aged about 18, (private patient,) after a smart fever, accompanied by severe epigastric pain, intolerance of light, redness of the conjunctiva, and slight sore throat, an eruption of papulæ appeared on the face and wrists. I saw her on the second day of eruption, when it was thickly out over the face and limbs. It soon spread over the whole body, and was very profuse, but kept distinct, except at a few parts. The iodine was applied to the face and back, with so much relief to the patient, from the itching, that she on many occasions made her sister apply it to various parts; in fact I

might say it was used all over her body, which circumstance she confessed after her convalescence. The secondary fever was severe, accompanied by much gastric irritation. There was also a good deal of suffering from a rheumatic affection of her wrists and ankles, which rendered her very helpless. She, however, got well, without any farther troublesome symptom. The scabs were thick, and remained a long time on the right side of her nose, which (as was remarked by her sister) had been less assiduously painted, from that side being turned to the wall, and inconvenient to get at. On this part there remain several small superficial depressions, and the forehead has some very slight marks, only discernible *en profile*, which I expect will not be perceptible in a little time. The face is pale and without any stain, and generally quite smooth. The case was very severe and was seen by several medical gentlemen, who expressed their satisfaction of the efficacy of the remedy. It is doubtful if this patient went through regular vaccinia.

Case 5.—R. C., ætat. 15. I was called to this case on the 5th day of the eruption. The girl had been under the care of a medical practitioner, who had not applied the iodine, although it was suggested to him by the priest, who had seen its advantages in the previous case. The eruption over the face was flat and ill-filled. Although profuse, it was distinct over the body. She was a delicate, dwarfish girl, subject to splenitis. At the period I saw her, she was very weak, depressed in spirits, and sleepless. She was ordered a small quantity of wine and water, and beef tea frequently, calomel and Dover's powder, and to have the face painted. Although the expectation of benefit was much lessened, by the late period of the application, it caused, as usual, some pain, but at the same time afforded so much relief from the itching, that she frequently desired its reapplication. The eruption became confluent on several patches on the limbs; but little eruption on the body. The face swelled, and there was salivation. The scab on the face formed a complete mask, but not very thick. Her spirits revived, and her strength was maintained by wine and soups. Her feet, legs and wrists became painful and swelled. She, however, recovered well in about three weeks. There remain several small superficial pits on the face, which could not well be otherwise, as the application was so late in being applied, and a mark of a scratch she made before the iodine was applied. But they are evidently very much modified even by the late use of the remedy, and the relief to the itching derived from it was manifest, from her often desiring its application and extension over other parts. Several boils took place on different parts, but she soon recovered. This patient had never been vaccinated. Her eldest sister was vaccinated during the progress of the case, and passed through the stages, in a satisfactory manner.

Case 6.—*Variola confluenta.*—A. A., ætat. 15, a delicate looking boy, had never been vaccinated, nor any of his family, three of whom were vaccinated on the occasion of my being called to see him, and all passed through the regular stages in a satisfactory manner. This boy had, a short time before his illness, received a visit from a young friend, just recovered from an attack of variola. The primary fever and epigas

tric pain were pretty severe. The eruption was profuse over his face and extremities when I saw him on the second day. The iodine was applied in an unsatisfactory manner, from the interference of the patient and his mother. The eruption soon became very profuse, and confluent on many parts. The tongue and fauces were covered by ulcers; the voice scarcely audible; some cough and expectoration. The iodine produced such a soothing and satisfactory effect, that he soon desired its reapplication, and it was extended to various parts to relieve the itching. The case, although very severe, went on well. Secondary fever was high, and there was much distress from the mucous membrane of the larynx, and from the pustules on the scrotum, and pains of his hands and soles of his feet, which are covered with pustules. He also suffered from rheumatism of the ankles and wrists, which were much swollen. The Dover and calomel afforded him relief and sleep at night. Beef tea and arrow root were ordered from the earliest day, and latterly wine and quinine. He was convalescent in three weeks, and able to sit up, in good spirits, saying he could dance with nurse, if the sores on his feet did not prevent him. Scarcely a trace of pit or depression being left on the face, whilst the parts unpainted showed numerous pits. On the 23d day from the appearance of the variolous eruption, an erysipelatous blush appeared on the forehead, and a similar one on the knee. An abscess formed in the axilla, and also on the eyelid and ankle. His back also became painful, and affected by erysipelas, and a smart fever supervened. His bowels discharged large quantities of ochrey looking fermenting and very offensive evacuations, for three or four days, when the fever and erysipelas subsided. About the 30th day the fever returned and assumed a typhoid type; dark, black, dry tongue; muttering delirium, subsultus tendinum, &c. &c. He continued in this precarious state for a week, when he became quite intellectual, and able to tell his wants, and good hopes were entertained of his recovery, when suddenly, after two days of this favorable state, he was seized with dyspnœa and hurried breathing, and died in a few hours. The treatment is omitted, as not being an object on the present occasion. The most satisfactory results were observed to attend the use of the iodine, both by allaying the irritation and preventing marks, scarcely any being perceptible. This case was seen by Dr. Campbell, in consultation, and by others, to witness the effects of the remedy.

I have treated several other slighter cases, in which the iodine was used in all with marked benefit in relieving the itching, and in all probability preventing pitting, as even in cases where the eruption is sparse, pitting may follow. I have also seen several severe cases in which it was tried in the Montreal General Hospital, under the care of other physicians, with the most satisfactory results, a summary of which accompanies this nctice.

I think I may add without overrating the advantages of the application, that being a powerful antiphlogistic, while it lowers the inflammatory action, it thereby controls the general fever, and moderates the risk and mortality from the secondary fever.

The two fatal cases which I had during the present epidemic, being

evidently rendered so by other causes than variola, namely, in one, by erysipelas and typhus fever, supervening during convalescence, on the thirty-first day after the appearance of the variolous eruption. The other fatal case was carried off on the thirtieth day by continued irritation, and wasting from rheumatism, abscess and bronchitis, with profuse mucous discharge.

I have very great pleasure and satisfaction in adding the testimony of Dr. Bergin, of Cornwall, to the beneficial effects of iodine in small pox; who had in 1849 an opportunity of using it on a very extended scale, such as rarely is the lot of any individual in this country. The following summary, which is founded on returns made to the Hon. Colonel Bruce, Superintendent General of Indian affairs, is very brief, but it comprehends all that can be desired in support of the claim of this application, as an ectrotic remedy. Dr. B. had witnessed the early experiments I had made on this subject, during his pupilage in Montreal, and gladly availed himself of the unusual opportunity he had, when employed by the Colonial Government, to afford his professional aid, to a tribe of Iroquois Indians at St. Regis, on the banks of the St. Lawrence.

He briefly states, "I have treated 300 cases of small pox among the Iroquois Indians at St. Regis, during an epidemic in 1849. Of these 200 were very severe, either confluent or partially so, and to whom iodine was applied, as follows:—The whole face was painted, daily from the earliest day that it could be done in *eighty-five cases* of confluent, or semi-confluent small pox, out of which *only seven exhibited any marks, and these were slight. Half the face* was painted in *seventy* cases of grave disease; of these, *sixty-one were free from any marks on the painted side*, five were badly pitted, and four slightly, on the painted side, while the *unpainted* side had numerous marks and pits, exhibiting a very striking and marked contrast, fifty cases were painted at different periods, during the maturation of the pustules, upon which the tincture did not appear to have much influence. There were eight cases of variola modificata. Twelve of the cases terminated fatally, one of which was of an hæmorrhagic type.

I need scarcely add, that I am fully convinced of the beneficial effects of tincture of iodine, not only as a powerful ectrotic remedy, but also as a very efficacious means of controlling the irritation and itching, and thereby not only relieving the suffering of the patient, but also removing the involuntary and irresistible disposition to scratch, and the consequent production of wheals and scars. I am also of opinion that it moderates the febrile action, and thereby the danger. I have used a small quantity of hydriodate of potass to aid in the solution of the iodine.

I freely confess that I conceive I would not be doing justice and my duty to my patient, if I omitted to apply this remedy on any future occasion. It should be commenced at the earliest day of the eruption, and continued daily for a week. I may add that I have been applied to, on many occasions, for iodine, by Indians from the Racquett River, to whom I could not afford further aid. The cases were generally of a very grave type, and it appears to me that the Indian constitution, like the Negro, suffers severely from this malady."

Besides the several medical gentlemen who saw these cases, during their progress, and subsequently after convalescense, I had the pleasure of showing such of the patients who had passed through the ordeal as I could meet with, to Dr. Marshall Hall, of London, during his visit to Montreal. Two of these (numbers 4 and 5) will be admitted not to have been selected as favorable specimens, not only from their severity, but also for one not having been seen by me till the 5th day, consequently not having had the application made till a late period; in fact these cases presented more marks than any other I had. Dr. M. Hall has kindly favored me with his opinion as follows:

From Marshall Hall, M. D., F. R. S., &c.

I have seen with much satisfaction several patients who had been afflicted by variola, and treated by Dr. Crawford by the application of the tincture of iodine. The superficial pits I noticed appeared to me to be so numerous and crowded, that confluence and deep and lengthened scars must have taken place, but for the effectual abortive treatment by the iodine; and I cannot but think this a most valuable application in such cases.

Extract from a note from W. Henry, Esq., M. D., Inspector General of Military Hospitals.

Since I received your communication on the use of tr. iodine as an ectrotic in small pox, I have directed it to be used, and careful minutes taken, in about a dozen bad cases of small pox in Military Hospitals, several of which I watched myself. I also observed the practice last year in two of your patients in the Montreal General Hospital.

In some of the military cases, the tincture was employed, but in the greater number a liniment was used, composed of powdered iodine and olive oil, in the proportion of a drachm of the former to an ounce of oil. I prefer this to the tincture for external use, because it adheres to the skin better and is not so easily evaporated.

I entertain no doubt of the great value of iodine in this practice. It appears to check the deepening and developing of the pustules, to prevent their confluence, and to lessen materially the cutaneous inflammation in the interpustular spaces. Though last, not least, by stopping the deepening of the pustules it prevents subsequent disfigurement by pock-marks.

Extract from a note from P. W. Maclagan, M. D., Surgeon, 20th Regiment.

I have employed the tincture of iodine in four cases of small pox, one of them semi-confluent, the others confluent and hemorrhagic. One which you saw terminated fatally, but the poor man felt great relief from the application, and earnestly begged its repetition more than once.

The others are decidedly less deeply marked than might have been expected. Indeed, the superficial traces which remain will, I doubt not, disappear entirely. One of my patients complained a good deal of the smarting, for an hour or two after the iodine was applied; but the re-

mainder made mention only of the smell of it—rather I suspect the irritation of the mucous membrane produced by the vapor.

From George W. Campbell, A. M., M. D., Professor of Surgery, McGill College.

Within the last two months I have tried iodine as an ectrotic in small pox, in the Montreal General Hospital, in four cases; two of them severe cases of confluent small pox, in which the face and eyelids, on the second day of the eruption, were greatly swollen, and entirely covered with incipient pustules. The tincture used was composed of a drachm of iodine to the ounce of alcohol, a few grains iodid. potasse being added to dissolve the iodine. The application was repeated once a day for four or five successive days. No suppuration occurred on the face, and when the mask, formed by the iodine scaled off, there was no pitting, and the face presented a marked contrast to the skin on the limbs and body being perfectly smooth and healed over, long before the scabs had separated in other parts. In neither of the above cases did the constitutional symptoms correspond with the severity of the eruption. There was no secondary fever and I have no doubt the disease was greatly modified by the ectrotic treatment. In conclusion I would remark, that I think the strong tincture of iodine employed more effectual and less painful than the ordinary tincture.

From A. Hall, M. D., Professor of Materia Medica, McGill College.

I have employed tincture of iodine freely both in private and Hospital practice, and from the general good results which I have witnessed following its timely application, I deem it an essential part of the treatment in that complaint. Of the various ectrotics which have been suggested, I consider it incomparably the best.

Shortly after you first suggested its use, I admitted into my wards at the Montreal General Hospital, a young woman, laboring under a severe attack of variola secreta. Doubting the efficacy of the tincture, but desirous of testing its value, I ordered its application to the left side of the face, neck and arms. On recovery, these parts presented scarcely the appearance of a cicatrix, while the collateral portions were severely marked by the disease. I regarded this as an unequivocal demonstration of the value of its practice, although I deeply regretted afterwards that my doubts had suggested such a mode of experiment.

I agree with the view which you have expressed that success depends on as early an application of the tincture as possible, and a steady repetition of it during the maturating period of the disease. In females I have extended the application of it, over the breast, as well as over the face, and I have been rarely disappointed in my expectations.

I regard the use of iodine as a decided improvement in the treatment of small pox; and I am happy to bear my testimony to its value, and to the obligation under which society is to you as its suggester.

Cases of Variola, treated with Tincture of Iodine, in the Montreal General Hospital.

TABULATED BY JOHN REDDY, M. D., L. R. C. S. I., HOUSE SURGEON.

Initials,	Age.	Day Tinct. 1st applied.	Character.	Days in Hospital.	Complication.	Remarks, &c.
E. B. . .	15	2	C.	30	Mild Conjunctivitis.	Very severe; slight superficial pitting nearpoint of nose
J. J. . .	25	1	C.	57	Furunculus.	Do. do. do. over forehead and side of nose.
J. H. . .	19	2	Coh.	20	Diarrhœa.	Not marked.
J. G. . .	17	2	Coh.	35	Bronchitis.	Do.
J. M. . .	20	1	Coh.	15	Mild Conjunctivitis.	Do.
J. M. . .	21	2	D.	25	Acute Conjunctivitis	Do.
W. C. .	40	3	C.	46	Hemorrhoids.	Slightly marked upon nose and centre of each cheek.
S. H. B.	19	1	D.	21	None.	Not marked.
R. W. . .	17	2	D.	17	Bronchitis.	Do.
E. C. . .	3	2	D.	35	Do.	Do.
R. L. . .	17	1	D.	39	None.	Very severe; 1 or 2 superficial marks upon the face.
J. C. . .	17	2	D.	23	Do.	Not marked.
L. C. . .	19	2	Coh.	33	Do.	Severe; slight superficial marking.
P. McC.	20	2	D.	9	Do.	Not marked.
A. McK.	4	2	D.	10	Do.	Do.
H. O. . .	45	1	D.	35	Do.	Do.
H. B. . .	20	2	D.	12	Do.	Do.
A. T. . .	12	1	D.	30	Do.	Do.
C. B. . .	7	1	D.	23	Do.	Do.
P. B. . .	2	2	D.	26	Do.	Rubbed the face; superficial marking very slight on forehead.
H. O'N.	5	1	D.	30	Do.	Not marked.
M. A. B.	9	1	D.	30	Do.	Do.
M. F. . .	24	1	D.	25	Do.	Very superficial on forehead.
H. W. .	36	1	D.	25	Furunculus.	Extremely severe, no marks.
D. C. . .	25	2	Coh.	45	Do.	Half the face painted; no difference in the sides.
K. H. . .	20	1	D.	25	None.	Not marked.
J. F. . .	5 mon.	1	D.	25	Do.	Do.
F. R. . .	18	2	D.	14	Do.	Do.
C. S. . .	35	1	D.	14	Do.	Do.
H. S. . .	43	1	D.	12	Do.	Do.
J. L. . .	35	2	Coh.	12	Do.	Do.
J. W. . .	22	2	D.	13	Do.	Do.

N. B.—C., Confluent; Coh., Coherent; D., Discreta.

In addition to the foregoing remarks, I have only to add that I am of opinion that the Tincture of Iodine is a powerful ectrotic, and the best I am acquainted with, and removes the variolous itching which is so distressing to the patient.

J. Reddy.

External Stimulus in Cholera.—The resources of professional judgement in the treatment of Cholera are not so numerous and efficient as to render a somewhat novel remedy unacceptable to those whose lot it may be to undertake the charge of many cases. I am indebted to a lady of heroic mind and great intelligence for the hints which led me to adopt in the collapse of cholera the powerful external stimulus which I shall presently describe. It appears that in the most desperate cases, even when life has appeared extinct, the native Indians are accustomed to apply the actual cautery freely to the abdomen, not unfrequently with the happy result of restored vitality. The remedy, based on the same principle, which I have employed in three cases with complete success in the Borough Jail of Newcastle, is precisely similar in kind, though somewhat less harsh and formidable in degree. A piece of linen dipped in brandy is placed over the epigastrium or abdomen, and ignited; the brandy burns away in a minute or so, producing a considerable feeling of pain, which renders it necessary to secure the hands of the patient. Slight vesication will probably follow, and, if successful, in a short time heart and pulse begin to return, and the feelings of the patient are greatly improved; vomiting will also generally be put a stop to. It is probable that the application may soon require repetition, the situation being somewhat varied. In one case, now convalescent, in which death was apparently close at hand, the most complete effect was produced by a third application along the spine in the lumbar region. Time will not permit me to give details of cases, but having now tried the "brandy blister" in seven or eight cases of total collapse, I repeat that in three it has been entirely successful, and in others has had the effect of temporarily rousing the patients; and if, as experience has taught me, in some of these it had been repeated with more energy, greater success might possibly have resulted. The patients now convalescent say that it is a severe remedy, but are quite conscious of its beneficial effects, and attribute to its use, without any hesitation, their restoration from impending death.—*Mr. Greenhow in Lancet.*

On the Use of Cinnamon in Certain Examples of Menorrhagia—By T. H. Tanner, M. D.—Licentiate of the Royal College of Physicians; Physician to the Hospital for Women, &c.—Amongst the numerous cases of menorrhagia which come under my notice in hospital and private practice, instances are not unfrequently met with where no satisfactory explanation can be given for the increased catamenial flow. Of course, amongst these, patients suffering from general plethora, from hæmorrhage caused by polypi either within or without the uterus, or from that dependent upon fibrous tumours, uterine hydatids, ulceration (simple or malignant), or upon a watery condition of the blood, are not included. In the instances alluded to, I have almost always been unable, after careful examination, to say upon what the menorrhagia depended, since no physical alteration could be detected in either the uterus or ovaries; it has only therefore been practicable to assert what were *not* the causes.

The syptoms usually presented are briefly these: the catamenia appear regularly every twenty eight days, and are at first only of the proper quantity; but, instead of ceasing after a duration of three or four days, they continue unabated for ten or fourteen, and occasionally even for three weeks. The general symptoms which arise from this debilitating discharge are just as might be expected. There is general weakness, langour, mental depression, with pains in the head, loins, and so on; the patient suffering, it is to be remembered, not from any diseased condition, giving rise to the hæmorrhage, but merely from the loss of blood itself. In other instances the discharge continues a less time, but the flow is more abundant, clots being frequently discharged; this variety is generally followed by leucorrhœa. My own experience tends to show that these forms of menorrhagia occur more frequently in unmarried than in married women; but, for many reasons, and especially because of the class of patients from whom my observations are for the most part deduced, I would not say positively that such is the case.

Ailments of this class are at all times troublesome to cure, but those I am considering are particularly so, from the absence of any special indications for treatment. In some of them, indeed, it appears, at first sight, only necessary to keep the patient quiet, to administer astringents, especially such as act particularly upon the uterus, and to regulate the diet, in order to give the desired relief. But it will often be found that these means are quite inefficient, and that the acetate of lead, gallic acid, the ergot of rye, oxide of silver, sulphuric acid, tincture of sesquichloride of iron, and similar remedies may be employed without any avail. In thinking over these cases I was led, from a remark made by Dr. Pereira, to try the use of cinnamon. In the last edition of the "Elements of Materia Medica," this gentleman says, when speaking of cinnamon, that "some writers regard it as acting specifically on the uterus," (vol ii. p. 1307,) and reference is then made to the writings of Sundelin and Wibmer. As far as I know, these are the principal authors who have recommended the use of this agent; for I am not aware that mention is made of it by gentlemen who have written on obstetrics and the diseases of women in this country. Having thus been led to try the effects of this agent, and having derived the most beneficial effects from its employment, I have felt desirous of making its value more generally known, that its utility may be tested on a large scale.

That its beneficial action is really due to some specific effect which cinnamon exercises upon the uterus, and not any astringent property it may possess from the tannic acid which the bark and leaves of it contain in common with all the lauraceæ order of plants, is, I think, certain; and partly in confirmation of this view, it may be mentioned, that in a case of labor in which I employed it, it *appeared* not only in a marked manner to increase the severity and rapidity of the pains, but the patient, who had in her previous labours suffered severely from flooding after the birth of the placenta, on this occasion lost only a very small quantity of blood. That this fortunate circumstance was due to the administration of the cinnamon I do not of course pretend positively to assert; the case

is merely mentioned to give some color to the opinion expressed that this agent acts specifically upon the uterus. Much clearer evidence of its value in such cases of menorrhagia as I have described, is, however, easily obtained. The principal points I would now refer to are, that it acts after the failure of other astringents; that it is most efficacious given alone, uncombined with other medicines; that if its employment be discontinued too soon, the discharge of blood returns; while, in a few instances it has been found necessary, after an apparent cure, to resort to its employment for the two succeeding catamenial periods, when the menstrual flow after continuing for three or four days, has not given any signs of abatement, and when the patient has begun to suffer from mental depression and the early symptoms of general debility. The form usually employed, and which appears to be the best, is that of the tincture, in drachm doses, using cinnamon water as the vehicle; it should be taken about every six hours, but not more frequently, as it is apt to give rise to nausea and vomiting. It is also better to continue its administration for about fourteen days after the symptoms which called for its employment have disappeared; and even then, if the case has been an obstinate one, a draught composed of it should be taken once daily for a month.

In concluding these brief observations, I trust I shall not be understood as recommending cinnamon as an infallible remedy in all examples of menorrhagia. All I would wish to assert is, that in a certain class of cases I have found it to possess properties of great value; and though I might have waited until I had been enabled to test its properties on a larger scale, yet I preferred giving the results of my experience at once, in order that the readers of THE LANCET might have the opportunity of employing this agent, and ascertaining its value for themselves. If they will do so, and record the result, we shall soon possess satisfactory data for determining the action of cinnamon upon the uterus.—*London Lancet.*

Two cases of Trismus Nascentium, which recovered under the use of Cannabis Indica. Reported to the Medical Society of S. Carolina, Oct. 1st., 1853, by P. C. GAILLARD, M. D., Charleston, S. C.

I am induced to report the following case, with some details, in consequence of its unusual termination in recovery. "Trismus of new born infants," says Romberg, "is the most absolutely fatal of all children's diseases. Cases in which a cure has been effected, must be received with great suspicion, unless the diagnosis be verified by very accurate details." With us, the disease is, unfortunately, too common to allow us to be ignorant of its characteristic features; and our experience teaches us that the German professor has not exaggerated its fearful mortality. But I am happy to be able to report another case of recovery, under the same treatment, which occurred in the practice of my friend, Dr. De Saussure, during the month of March, 1853. The details of this case, furnished by Dr. DeS., will be found below, (case 2.) Time and further experience must determine whether we possess in cannabis an agent

capable of controlling the disease; or whether the cases which follow must be reckoned amongst those fortunate accidents, or coincidences, which too often mislead us in estimating the value of therapeutic agents.

Case 1.—Rachael, a negress, æt. 38, of good constitution, was delivered of her eleventh child on Saturday, 23d July, 1853. The cord fell on the sixth day, and the child, a fine robust boy, did well until Tuesday, August 2d, when, towards evening, it was observed to be fretful and to nurse with difficulty. During the night it lost the power of taking the breast, and paroxysms of spasm became evident. I saw it the next day, August 3d. The child was lying on the mother's lap.—Paroxysms of spasm could be readily brought on by blowing into the face, or by attempting to introduce the finger or a spoon into the mouth. During the paroxysms, the muscles of the face were contracted so as to produce the characteristic expression; the lips prominent; the jaws fixed and slightly separated; the tongue pressed against and filling the narrow space between them; the nose compressed; the forehead wrinkled longitudinally; and the child uttered the grunting, whining cry so peculiar in this disease. The muscles of the back and arms were rigid and the fingers were forcibly shut upon the palms of the hands.

The navel had healed; there were no signs of irritation about it. The examination of the head showed that the occipital bone was in its normal position; the parietals did not override, or in the slightest degree overlap its anterior border. The child was still able to swallow a little; for, although whenever the milk with which the mother fed it was poured into the mouth, the greater part was forced out by the spasmodic action induced by its introduction, yet after a time a little was swallowed.

The following directions were given: the child to be constantly fed, while awake, with milk drawn from the mother's breast and poured into the mouth; large warm poultices to be kept constantly to the abdomen; a warm bath to be given twice a day, and a teaspoonful of the following mixture to be administered every two hours: Tinct. Cannabis Indica ʒii, Camphor Water ℥ii.

On the 4th no change. On the 5th the spasms were reported as having increased in frequency and severity; the medicine was directed to be given every hour and a half. On the 6th and 7th no appreciable change; the treatment was assiduously prosecuted. On the 8th the dose of the medicine was increased: ʒii. of the tincture of cannabis to ℥ii. of camphor water, a teaspoonful every hour. On the 9th the mother said that the child had nursed a little twice when she forced the nipple into its mouth. The spasms of some of the muscles were, however, still very violent, as I could with difficulty, and only by using considerable force, extend the fingers, which were forcibly contracted on the palm. On the 10th the child took nourishment more freely by the spoon. On the 11th the spasms were rather less frequent, and not so severe; the rigidity was less, and the child nursed twice. The improvement continued progressively. On the 21st the spasms were very short, and the child took the breast readily when placed to its lips. On the 24th the mother reported that there had been no paroxysm of spasm

for 24 hours, and that the child nursed freely. From the 16th, the intervals between the doses of medicine were gradually increased, and it was continued, three doses a day, for some days after the disease had disappeared. The child has continued well up to this time, October 1st.

Case 2.—Reported by H. W. DeSaussure, M. D. Priscilla, a stout, healthy negress, æt. 26, was delivered of her third child on the 13th March, 1853. The infant was a large healthy looking male. The cord was detached on the fifth day; on the seventh day the child was noticed as unusually fretful, and passed several greenish, watery stools; on the night of the eighth day, it was fretful, restless, scarcely slept at all, and was unable to move, although apparently anxious to do so. I saw it on the morning of the 9th day, the 22nd of March. It was lying in the nurse's arms, with the features contracted, the brows corrugated, the muscles of the neck and back rigid and hard, the arms and legs flexed, so as to be extended with difficulty; the hands contracted, with the thumbs drawn tightly upon the palms; the jaws not very tightly closed—the little finger could be introduced into the mouth by a little effort; deglutition was possible, but the child could not nurse. The navel was not entirely healed, but the ulceration left by the dropping of the cord looked healthy. The child was ordered to be placed in a warm bath, a large poultice applied to the abdomen, and a teaspoonful of the following mixture given every two hours, viz: ℞ Tinct, ℥ss.; Syr. wild cherry, ℥iss.; and the mother's milk to be given by teaspoonfuls frequently. On the 23d there was aggravation of all the symptoms; the jaws were so firmly closed that a teaspoon was with difficulty introduced into the mouth; deglutition was extremely difficult; the arms, hands and legs were more firmly flexed; opisthotonos was present to a great degree; the slightest motion, a breath of air upon the face, even touching the lips with the finger, was sufficient to bring on general spasms, accompanied by the peculiar whimpering cry so characteristic of this disease. The head was carefully examined; no depression of the occipital bone could be detected. The same treatment was continued, and a teaspoonful of the mixture was given every hour. From the 24th to the 28th, the intensity of the disease gradually increased, until it seemed impossible that the child could survive each spasmodic paroxyism. It was with great difficulty, and only by patient perseverance, that either milk or medicine could be swallowed. All general treatment was now abandoned. A dose of the cannabis mixture was ordered to be given every half hour, and as much milk given as the infant could be made to swallow. On the 28th, 29th, 30th, and 31st March, half an ounce of tinct. cannabis was administered every twenty-four hours. On the 1st of April symptoms of amendment began to be visible; the spasms were less frequent, and less easily excited; the rigidity of the arms, hands and legs, was less; and deglutition was effected with less difficulty. This improvement gradually but steadily progressed; the quantity of cannabis was proportionately decreased, and by the 10th of April, the child was entirely convalescent. It is now a fine, healthy infant.—*Charleston Med. and Surg. Journal.*

Thlaspi bursa pastoris in Hæmorrhage. By Dr. HANNON.—The cruciferæ arrange themselves, according to their therapeutical constituents, into two groups:—1st. Those which contain a sharp essential oil, and are, on that account, used as an irritant to the skin, such as mustard, etc. 2ndly. Into those which contain less essential oil, but, on the other hand, much astringent and bitter matter, and which are, therefore, useful in assisting digestion and improving the state of the blood. The number of the latter is very great. The whole coast of Northern Europe bears the cochlearia officinalis, a most useful antiscorbutic. The whole surface of Europe produces the nasturtium officinale, cardamine pratensis and amara, and lepidum sativum (garden cress.) On the coast of America and the Antilles is found kakile Americana,—another antiscorbutic of great value; the Laplanders, the Kamtschadalen, and the Greenlanders possess their nasturtium palustre and sylvestre.

All these plants possess an essential oil, containing sulphur, a bitter resin, tannic acid, salts of soda, potash, lime, and iron, with a nitrogenous substance, which, in decomposition, causes the evolution of ammonia.

The thlaspi bursa pastoris was used in the earliest periods, according to Dioscorides, as a remedy in hæmoptisis; in later times it was recommended by Simon Pauli, and recently it has been approved by Lejeune, Merst, and Delens, for the same disease, and by Dubois for hæmaturia and hæmoptisis. Rene Van Oye and Rademacher confirm its utility.

The author found it useful in many diseases, and especially in those hæmorrhages in which the fibrin of the blood is diminished. In certain subjects, the flow of blood constitutes the only disease; it occurs spontaneously, and without fever. The patients have, during the first attack, the aspect of good health, a fine rosy skin, and are well nourished; but upon closer inspection there is remarked a want of energy in the organic functions, labored and slow movements, and general apathy. By frequent recurrence of the hæmorrhages, there ensues pallor of the tissues, well pronounced anæmia; the nervous system seems over excited. Hence follow pains in the joints; the least pressure is followed by ecchymosis, in the form either of petechiæ or purpura; the least wound bleeds obstinately, and requires the repeated application of astringents; coagulation of the blood ensues with difficulty. In women the catamenia are frequent, profuse and exhausting. The blood appears serous and pale,—the clot is soft, small, and never buffed. The skin perspires easily and abundantly; every breath of air calls forth neuralgia. The urine is pale and copious; the evacuation from the rectum, fluid; and hydropic effusions, such as œdema of the foot, occur readily. The thlaspi bursa pastoris, administered for a considerable time, works in these cases a change in the constitution of the blood, especially when aided by the influence of good air and properly regulated diet. The best formulæ are the succus thlaspi, prepared cold, and of bitter taste, three to six drams a day. The extractum thlaspi, the expressed juice, reduced by evaporation to the consistence of an extract, one to two drams a day.—*Med. Times, from Presse Med.*, 1853.

MATERIA MEDICA AND THERAPEUTICS.

On the Effect of Coffee. By Dr. ZOBEL.—In a long and interesting article Dr. Zobel discusses the effects of coffee as well as, incidentally, other dietetics. He denies that the use of coffee (and of tea) is to be estimated by the quantity of nitrogen it contains, and shows by calculation how comparatively small a quantity of nitrogen could by this means enter the system. He also denies the accuracy of Rochleder's opinions, that coffee gives rise to the formation of creatine, or if it does so, he questions whether this may not result from its action on the nervous system, and not by immediate transformation of its own substance. With respect to the influence of coffee on the health, he refers to the opinions of a few enthusiasts, such as Jury and Thierry, who have supposed it to be most prejudicial to life. He then inquires what are the chemical changes which occur in the caffein when introduced into the blood. The first change he states to be as follows :

1 equiv. caffein $C_{16}N_4H_{10}O$ makes { 1 equiv. hydrocyanic acid C_2NH. 1 equiv. of a body of the composition $C_{14}N_2H_9O$.

The quantity of hydrocyanic acid is very large, and quite enough to appear at first sight a justification of those who have asserted the danger of coffee. But if the examination be continued, this apprehension is dissipated; another equivalent of caffein acting on the substance formed by the separation of the prussic acid, gives rise to four equivalents of ammonia, the great antidote of the acid, and a third equivalent of caffein and water gives rise to one equivalent of quinine, two of oil of turpentine, and three of urea, while twenty-seven of oxygen remain. The formula is thus given :—

3 equiv. caffein=$3(C_{16}N_4H_{10}O_4)$	are	$C_{48}N_{12}H_{30}O_{12}$
23 equiv. water . . .	are	$H_{23}O_{23}$
		$C_{48}N_{12}H_{53}O_{35}$

Thence are formed—

1 equiv. hydrocyanic acid . .	$C_2N_1H_1$
4 equiv. ammonia	N_4H_{12}
1 equiv. quinine	$C_{20}N_1H_{12}O_2$
2 equiv. oil of turpentine . . .	$C_{20}H_{16}$
3 equiv. urea	$C_6N_6H_{12}O_6$
27 equiv. oxygen	O_{27}
	$C_{48}N_{12}H_{53}N_{35}$

By the influence of the ammonia and turpentine, the sedative effects of the hydrocyanic acid are neutralized, and are replaced by a slight stimulant effect on the peripheric nervous system. The ammonia would produce its stimulant effect, and soon pass off, were it not fixed in some measure by the strongest neurine tonic known, the quinine. To these effects of caffein, it is necessary to add those of the tannic acid and vola-

tile oils which the roasted coffee nuts contain, when coffee itself is drank. Dr. Zobel thus confirms the statement of Lehmann, that the amount of urea is increased by the use of caffein. A few pages at the end of the paper are devoted to a consideration of the mode of origin of caffein in the plant, which we omit.—*Brit. & For. Med. Chir. Rev. from Prag. Viertel. Jahrsch.*, 1853.

Case of Poisoning by Nux Vomica; Recovery. (Under the care of Dr. HASSALL.)—Nux vomica is one of those poisonous substances for which we unfortunately possess no antidote, and whose destructive properties have, by experiments upon animals, and by accidental or wilful ingestion among human beings, been abundantly ascertained. No opportunity should, however, be lost of verifying or controlling what is known respecting the effects of nux vomica or its alkaloid strychnia, and this consideration induces us to bring the following case before our readers.

Dr. Christison states that nux vomica "is a powerful narcotic of that limited class which act almost entirely on the spinal column, producing, in poisonous doses, violent tetanic convulsions, without impairing the functions of the brain. Two drachms of the powder have proved fatal in two hours, and even *thirty grains* have been said to cause death. Those who recover from the primary effect on the nervous system may suffer from irritation in the alimentary canal, and an instance is on record of death being thus apparently produced in three days by three grains of the spirituous extract." The effects of strychnia (the proportion of the alkaloid to the nux vomica seeds being about one two-hundredth part) are stated to be as follows:—

"The slightest observable effects from small doses are twitches from the muscles of the arms and legs, occurring especially during sleep, and accompanied with restlessness, some anxiety, acceleration of the pulse, and generally slight perspiration. More rarely the bowels present increased activity, the urine is either augmented or discharged more frequently, and the venereal appetite is promoted. Larger doses cause violent startings of the muscles, or even also a tendency to locked-jaw, which are succeeded by stiffness, weariness, pain or rending in the limbs. In their highest degree these amount to violent tetanic spasm, occurring in frequent fits, with brief intervals of repose, acute sensibility, and dreadful alarm. . . . . Strychnia is one of the most subtle poisons. I have seen a wild boar killed in ten minutes with a third part of a grain of commercial strychnia injected into the cavity of the chest. I have known two-thirds of a grain cause alarming locked-jaw and general spasms in the human subject when swallowed. One grain introduced into a wound would probably prove fatal to a man; and Pelletier and Caventou have killed a dog in thirty seconds with the sixth of a grain of the pure alkaloid. . . . . *There is no antidote for it.*" Having premised thus much respecting the effects of nux vomica seeds and its alkaloid, let us describe the history and symptoms of Dr. Hassall's patient from the notes taken by Mr. Curgenven, house-surgeon to the hospital.

Abraham D——, aged twenty, a laborer of a healthy appearance, was admitted into the hospital on August 27, 1853, having three-quarters of an hour previously taken about one drachm and a half of powdered nux vomica, which he purchased for the alleged intent of poisoning rats.

When admitted he was in a profuse perspiration, the skin of the face, neck, and chest was greatly congested, the eyes suffused, the pupils slightly contracted, and the pulse hard and excited. The patient was greatly agitated, and on moving he grasped firmly the nearest object for fear of falling.

A few minutes after admission a tetanic paroxysm came on suddenly, the man was thrown into a state of opisthotonos, all his muscles becoming rigid, and respiration for the time suspended. This fit lasted about half a minute, when the muscles became relaxed, and he was again able to answer questions. Two emetics (sulphate of zinc?) had been given him before he was brought to the hospital, but neither had acted.

On admission a sulphate of zinc emetic was administered, but without effect. The stomach-pump was then used, and mixed with what was ejected could be seen some greyish powder, but unfortunately the fluid was thrown away without any tests being used.

The patient now stated that having purchased the poison (said by the chemist to have been two drachms of powdered nux vomica) he went home, and mixed it with some water in a wine-glass, and whilst drinking it his mother knocked the glass out of his hand; he had, however, drank nearly the whole of it. Soon after the ingestion of the poison he felt a little drowsy, and the first paroxysm of tetanic spasm came on about ten minutes afterwards. He had several of these fits before he was brought to the hospital, and five after his admission into the ward. They went on decreasing in severity, and none were observed after the fifth was over.

The night following, the patient slept well, and the next day he complained of cramping pains in his limbs when he moved them; tongue rather dry; much thirst; bowels confined. He was ordered an aperient and a saline mixture.

On the 29th, the second day after admission, the pains had left him, his bowels had acted freely, the feverish symptoms had subsided, and the following day the man was discharged in very good condition.

It is a pity that the exact quantity of nux vomica powder which the patient took could not be ascertained; but it may approximatively be said that the dose was a very dangerous one, lying as it does, between the two drachms and the thirty grains mentioned by Dr. Christison. The case which we have just related presents some of the features which have been described by toxicologists—viz., tetanic spasms of a very violent nature succeeding each other very rapidly, and which disappeared completely when the poison had been washed away. Permanent locked-jaw did not, however, set in, but the cramping pains in the limbs, which came on towards the second day, and the uncertainty of gait which the patient manifested on his admission, were quite in keeping with the usual effects of the poisonous substance. The undoubted usefulness of the stomach-pump was well-shown in this case, and the circumstance

affords an additional proof that this valuable instrument is one of the best contrivances for thoroughly emptying and washing out the cavity of the stomach.—*London Lancet.*

Poisoning by Atropia applied to the Conjunctiva.—The Gazette des Hopitaux gives an account of a case of poisoning by atropia, which is remarkable for the small quantity employed, and the place of application—viz., the healthy conjunctiva. A patient in the Hospital Saint Antoine was laboring under double cataract, complicated with adhesions of the iris to the lens. In order to ascertain exactly the condition of the eyes, three or four drops of a solution, containing about one grain of atropine to two ounces of water acidulated with acetic acid, were instilled into each eye. Half an hour afterwards the patient suffered from vertigo, and complained of disagreeable, unusual sensations; three quarters of an hour later he manifested all the symptoms of poisoning by belladonna,—redness and animation of the face—pupils, though irregular, enormously dilated, incessant hallucinations, seizing the bedclothes, and grasping at objects in the air. He could not raise himself from his bed, nor advance a step without being supported, as his limbs trembled and gave way at every effort. Pulse full, and beating 120. These symptoms gradually passed off, but the patient did not recover his normal condition for three or four days afterwards. Being interrogated upon the delirium and hallucinations of the preceding days, he had only a vague recollection of what had passed.—*Dublin Med. Press.*

At a Special Meeting of the Northern Medical Association of Philadelphia, held Nov. 15, 1853, the following preamble and resolutions were unanimously adopted:

Whereas, It has pleased Almighty God to remove from our midst to his final home, Dr. Thomas Hobson, one of our esteemed and talented associates, therefore

Resolved, That we deeply sympathise with his bereaved family in this dispensation of Divine Providence, and that the President and Secretary be instructed to convey to them the sincere condolence of this Association, for the irreparable loss they have sustained.

Resolved, That the members of this Association attend his funeral.

Resolved, That the foregoing preamble and resolutions be published in the Medical Examiner and Medical News, and in one of the daily papers.

N. L. Hatfield, President.

Thos. Bond, Secretary.